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Seminole Decline Gives Note of Optimism to Market

Opinion is that the big Oklahoma field is key to the situation despite mounting production in West Texas

By KENT RIDLEY

A DECLINE of 25,000 barrels in daily production at Seminole within the past week has a brightening effect upon the crude oil market, although this decrease has been more than offset by West Texas. At the same time new points of production in the Seminole area are offering further threat to stability of prices in 1928.

The average daily production of all fields in the United States during the past week as estimated by the American Petroleum Institute, was 2,487,500 barrels, an increase of 6,750 barrels over the average for the previous week. Although this change is slight, there were some material increases and decreases in individual sections and States. The greatest were in Texas, which increased 44,000 barrels, and in Oklahoma, where production was approximately 30,000 barrels less than during the previous week.

The increase in Texas was the result of gains of approximately 40,000 and 5,000 barrels, respectively, in West Texas and the Gulf Coast region, all other sections of the State showing only slight changes. The daily average for the State was 673,050 barrels; that of West Texas was 271,800. The increase in the western section was brought about largely by a gain of 15,000 barrels in Crane and Upton Counties, and increases of 11,000 and 13,000 barrels, respectively, in Pecos and Winkler Counties. The chief increase in the Gulf Coast was that of Spindle Top, over 5,000 barrels, the new average being over 55,000 barrels.

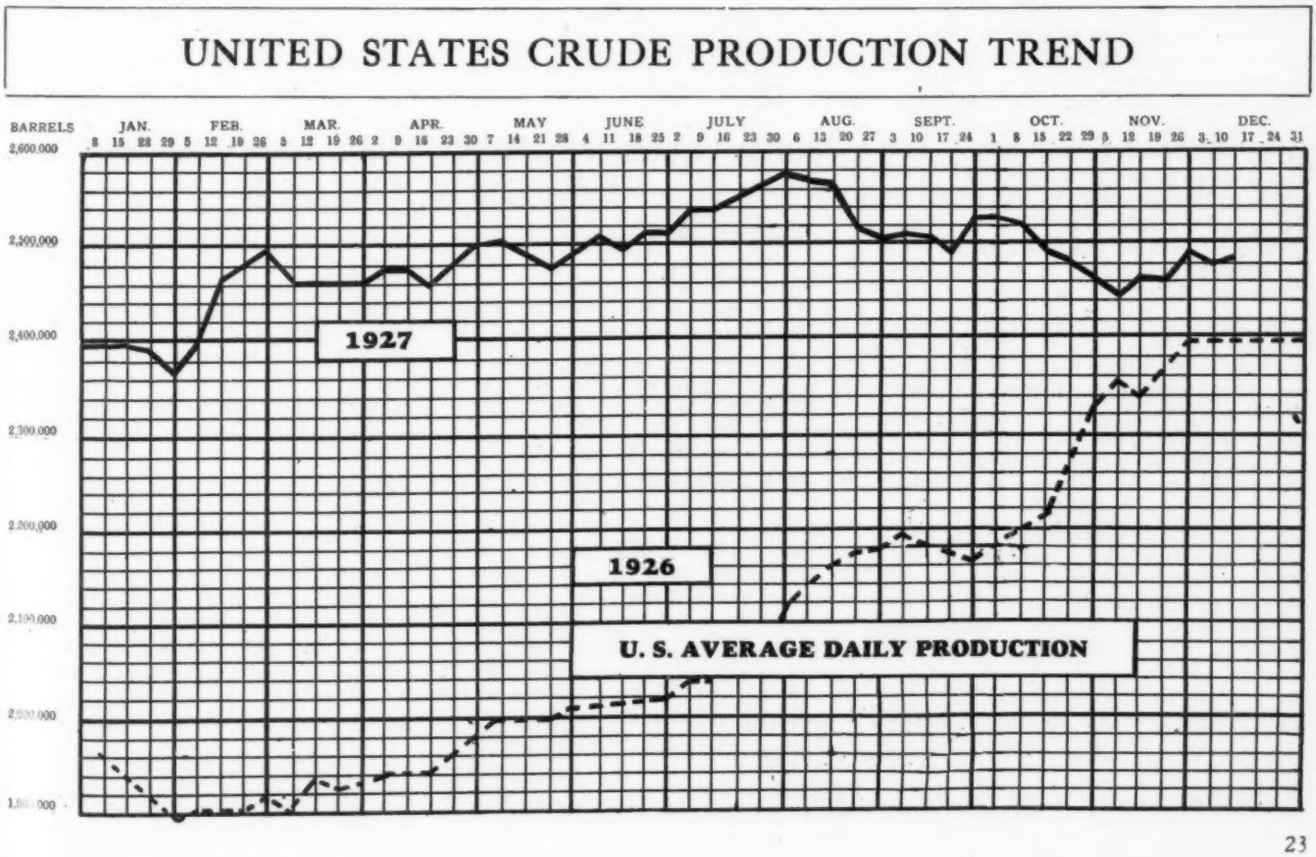
Oklahoma's decrease in daily yield was due to drops in all pools in the Seminole area. The daily average for this area as a whole was 395,550 barrels, a decrease of 28,250 barrels.

California's daily average for the week was 627,400 barrels, an increase of 1000 barrels; that of Louisiana 62,250, a decrease of 850 barrels; of the Eastern States 112,000 barrels, decrease 1750 barrels; Arkansas 96,100 barrels, decrease 550; and Kansas 106,050 barrels, decrease 250 barrels. Among the Rocky Mountain states the most important change was in Wyoming, its daily average falling to 52,300 barrels, a decline of more than 5000 barrels.

Although initial production during the past week was not as great as that of the previous week, it was, nevertheless, comparatively large, with West Texas bolstering up the figures. There were 347 completions, including 184 oil wells; initial production 106,965 barrels. During the previous week 212 wells yielded a combined initial of 134,516 barrels. The new gas wells for the week numbered 55, or 22 less than the number completed during the preceding seven days; and there were 108 failures, a decrease of eight.

The 92 completions in Texas included 51 new oil producers of a combined initial of 81,917 barrels. During the previous week 64 wells gauged approximately 100,000 barrels. Of the State's 81,917 barrels of new oil for the past week, West Texas, contributed 75,230 barrels through the completion of 20 wells; and Pecos County alone furnished over 65,000 barrels of new oil, this amount coming from only 10 wells in the Yates Field.

From 44 new oil producers, Oklahoma furnished 17,431 barrels initial production, about 5000 barrels less than that of the 42 new producers completed during the previous week. California's contribution of new oil aggregated



DETAILS ON CRITICAL FIELDS

Pool—	Oil Wells Completed	Total Initial Production	Initial Per Well	No. Producing Wells	Daily Production Barrels	Daily Production Per Well	Rigs Up	Wells Drilling
PANHANDLE								
Hutchinson County	1,079	541,420	502	983	57,780	59	7	25
Gray County	176	66,325	377	171	19,260	113	19	35
Carson County	177	58,695	332	155	8,120	53	..	6
Wheeler County	41	14,170	346	34	1,190	35	3	10
Totals	1,473	680,610	462	1,343	86,350	64	29	76
WEST TEXAS—								
Church & Fields	166	193,760	1,167	160	83,105	519*	5	15
Gulf-McElroy	55	49,700	904	55	19,630	357	..	2
Hendricks	30	84,790	2,826	38	51,435	1,354*	27	62
Yates	84	517,330	6,159	80	47,455	593*	41	46
Totals	335	845,580	2,524	333	201,625	605	73	125
OKLAHOMA—								
Seminole	1,160	1,497,362	1,290	1,048	381,678	364	9	150

*Porduction partially pinched.

4405 barrels from 15 producers, while during the week before the same number of wells had a combined initial of approximately 10,000 barrels. Four completions in Arkansas netted only one oil producer, a 10-barrel well. Louisiana supplied 1375 barrels of new oil from eight producers, as against only 175 barrels from three wells for the previous week.

The same old cry exists to determine the Mid-Continent's market condition. If new discoveries are properly controlled until Seminole's present five producing fields are past the danger line, the newly opened fields do not loom as market weakeners. If proration in effect for the past quarter continues to stand, producers needing better prices for their crude need not worry at Seminole's predicted greatness. Early in 1928 the daily yield from the area should be to a point low enough to stimulate better demand, and hence, better prices.

Seminole operators, as they see it around Tulsa, have only to worry about Seminole production. There is no other big source of production in sight at the present time which offers to compete directly with this grade of crude, and it is Seminole that continues to disturb the markets on high grade light oils. From the line of demarkation in demand between Seminole crude and equally high class crudes and West Texas and Panhandle oils, it seems that, regardless of the flush in the latter sections, good quality sweet oils of Oklahoma would not be disturbed. In other words, if West Texas crude increases to the point of flooding the markets beyond the bearing of the buyers, this section is cutting its own throat and not that of Seminole and fields of a like grade of crude.

Although the Texas Panhandle district is doing a little better than holding its own on current production because of flush production coming from a high gravity pool in Gray County, the crude market is firm, with a few premium contracts being made. The demand for Panhandle crude is spreading, as indicated by contracts recently made by Roxana Petroleum Corporation to ship 1,500 barrels of crude daily via tank cars for 60 days to Standard Oil Company of Kansas' plant at Neodesha. The Gilliland Oil Company is also reported to have contracted to purchase Pure Oil Company's Gray County production at 10 cents premium for tank car delivery to the former's New Mexico plants.

A top heavy market in the West Texas district is following in the wake of increased production, and the principal weak spot is centered around the Hendricks field, where market outlets for the oil have been slow in arriving. Contracts have been made in recent weeks for large quantities of this 30-degree gravity oil by inland and coastal refiners at prices that represent a cut below the posted price of 60 cents per barrel, considering that in most cases the buyer is getting the oil loaded on tank cars 20 miles below the field. Production in the Hendricks field was allowed to cross the 50,000-barrel mark daily throughout the past week as result of new field storage being completed, and less than 20,000 barrels of this daily average output was taken by Southern and American Petroleum Company, the only concerns with lines in operation.

The Texas Company is to begin taking large quantities of crude out of the West Texas district within a few months through the purchase of partially developed properties of the Pure Oil Company in the Hendricks and Yates fields, and has announced plans to lay an eight-inch line from the former field to tank car rack at McCamey, a distance of about 80 miles. The Texas Company is interested in West Texas crudes to apply on fuel oil contracts, and will move all oil to the Gulf Coast for refining. A direct trunk line outlet from West Texas is almost certain to be started by The Texas Pipe Line Company early next year, as railroad transportation is more costly than the pipe line tariff and congestion of freight cars is already appearing on the two lines making direct contact with the larger oil fields.

California

Just as predictions that peak production in the Long Beach field would not exceed 150,000 barrels were being made, a 4400-barrel well was completed. It must be admitted that only the completion of several dozen additional wells along the edge tracts will disclose the potential possibilities of the great field. Two weeks ago a few small wells were completed in the heart of the field, and their poor showing indicated that the field was not as dangerous as it was generally regarded. Late developments, however, have caused a general revision of figures, and it looks as if the edge wells, rather than those on the inside, are the ones to fear. The deep sand in the center apparently lies so near the bottom of the old wells that it has been drawn upon extensively in the past. The edge wells had barey tapped the sand, and by deepening them 1000 feet, an almost entirely new formation is encountered.

Exports from California during the week were unusually large. Fuel oil topped the list, with gasoline shipments running second. The movement of crude oil was also very satisfactory. Pacific domestic and foreign trade were especially good.

Change Yates Proration Plan to Acreage Basis, Effective on January 1

Fort Worth—Representatives of producing companies in the Yates field met here Monday to perfect plans to shift the pipe line proration on January 1 from a potential production basis to a proven acreage basis, and all but two producing companies in the field have verbally agreed to the change.

The new method of allocating pipe line runs from the various wells is to be in effect for a period of six months beginning with the first of the year. Another meeting will be held before the close of December to formally ratify the change in proration methods.

Proven leases with production now aggregate 15,000 acres, according to figures submitted at the meeting Monday, and an additional 1600 acres is considered proven but without production. Under the acreage proration plan the producers will share in the 42,000 barrels daily pipe line outlet now being provided by Humble and Illinois pipe line companies in proportion to the number of proven acres held under lease.

Gulf Production Company is not a party to this plan, and is handling most of its Yates field oil through a private line, while Simms Oil Company has not made its decision on the new method of distributing the pipe line outlet.

Hourly open flow tests of producing wells in the Yates field will not be taken by the proration committee, according to the terms of the new plan, and it was also decided at the last meeting to use the same proration figures during the last half of December as were used during the first period of the month. Therefore, the new wells completed since December 1 will not be gauged, and in the future the potential daily output of the Yates field will be an unknown quantity, although it was estimated at 604,974 barrels daily on the last official one-hour open flow gauge.

West Texas Well Supplied With Steel Storage

Isolation of fields from market has made construction of tanks on large scale necessary to handle production

By H. H. KING
Staff Representative

FORT WORTH, TEXAS.—Steel storage facilities will be a big factor in determining the trend of daily production in the West Texas district during the next four months, as the current output of crude in the district has greatly exceeded direct pipe line outlets completed and building, with a daily average production of 257,620 barrels during the past week. Facilities for making tank car shipments from the district are somewhat elastic, but only three railroads serve the district, and their combined transportation outlet for crude would be crowded if oil now going to field storage should be diverted to tank car movement.

The West Texas district is credited with having a gross total of 24,205,000 barrels of large steel tankage completed and under construction, of which 19,289,000 barrels is in service, or available for immediate use. The tanks under construction and contracted for immediate erection amount to a gross total of 4,340,000 barrels. Within the past two months 4,899,000 barrels of storage has been completed in the West Texas district, while during the same period new orders for tanks amounted to 3,313,000 barrels, thus indicating a temporary lull in tank building after an active spurt in August and September.

A renewal of tank building on a large scale is scheduled to take place shortly after the close of the present year, and the flush production in the Hendricks and Yates field will supply the bulk of the demand, while the Church & Fields area, Crane County, may require a few more tanks. The deep lime pay on the Howard-Glasscock County line may also result in a tank building program being forced on the numerous small operators now drilling for this prolific oil horizon, as the Col-Tex Refining Company is virtually loaded up on its crude requirements in the district, and Magnolia has not indicated any desire to take on a large quantity of this expected production, although Magnolia discovered the deep pay and erected five 55,000 barrel steel tanks at its mainline pump station, located north of the field, to run its own oil.

Magnolia is known to be among the West Texas producers and crude buyers that proposed to materially increase their West Texas storage facilities, while the Roxana Petroleum Corporation is also facing a big tank building program to accumulate production until the Shell Pipe Line Company can extend from Southern Oklahoma to the district with a 10-inch line. The Texas Company is also expected to join the tank builders account of having purchased the proven properties of the Pure Oil Company in the Hendricks, Yates, McCamey and Church & Fields, areas, and will more than likely build a direct line from the district to tidewater. The Illinois Pipe Line Company, which is winding up its first storage program at Del Rio with 25 80,000-barrel tanks and filling same at the rate of 12,000 barrels daily with Yates field crude, will erect more tanks before its line can be extended through to the Coast and put in operation. Illinois is paralleling its eight-inch line to Del Rio with a 10-inch carrier, and will store oil at the latter point at a much faster rate when the second unit is completed.

The Yates field proper has commanded a surprisingly few large tanks considering its large potential crude yield, but will make history in building tanks should the proration agreement holding down current production to available pipe line outlet be dissolved. The tank concerns are observing every move the operators in this field make towards ending the proration plan.

The Hendricks field has been directly the cause of the major portion of the new tank buying in West Texas lately, and has possibilities of creating the largest demand for tanks over the next four months. Storage facilities in the field proper and at the tank car racks on the T. & P. Railroad to the south in Ward County now aggregate 3,473,000 barrels, of which 2,118,000 barrels have been completed, leaving 1,355,000 barrels to be completed. The flush output of the Hendricks field has been held in check to a large extent, but during the past two weeks the lid has been raised and production averaged 51,435 barrels daily during the past week from 38 flowing and pumping wells. All but 20,875 barrels of this current production is going into field storage. Private lines going into the field by Roxana, Independent, Atlantic are not expected to equal the production of the companies, while the lines being built into the field by Humble and Ocean Oil & Pipe Line Company will not offer much aid to the producers, especially since Humble has a large amount of its own production to handle. Magnolia will make use of Atlantic's line from the field to Midland, while Gulf has elected to build more tanks before entering the field with a line. A line to the railroad is planned by the Landreth Production Corporation early next year.

Midland has been made a crude con-

WEST TEXAS STEEL STORAGE

Large steel tankage completed, building and contracted for in 12 counties in West Texas aggregates 24,205,000 barrels gross capacity, of which 19,865,000 barrels is completed and 4,340,000 barrels is scheduled for completion in a few months. The tankage program is shown below by counties:

Counties—	Gross Capacity Completed Tanks	Capacity Tanks Building	Total Capacity
Crane	6,897,000	615,000	7,512,000
Crockett	55,000	.....	55,000
Howard	165,000	110,000	275,000
Jones	55,000	.....	55,000
Midland	1,685,000	1,235,000	2,920,000
Mitchell	420,000	.....	420,000
Pecos	538,000	165,000	703,000
Reagan	3,523,000	.....	3,523,000
Upton	2,409,000	860,000	3,269,000
Val Verde	2,000,000	.....	2,000,000
Ward	750,000	440,000	1,190,000
Winkler	1,368,000	915,000	2,283,000
Totals	19,865,000	4,340,000	24,205,000

centration point by Magnolia and Atlantic Oil Producing Company, and 10,000 barrels of the daily production of the latter concern in the Church & Fields and Hendricks areas are to be transported from Midland by Magnolia on a common carrier basis to the Gulf Coast. Gulf erected 10 tanks at Midland to store Crane County Oil until its trunk line could be completed, but will not have to add to this farm. However, Gulf's 10-inch line from Midland to Ranger has been registering a number of breaks lately, because of cold weather contracting the pipe, and the idle tankage at Midland avoided a shutdown on production in Crane County.

Prairie Oil & Gas Company is rapidly accumulating a big stock of crude in the Church & Fields area owing to Humble continuing to enforce its proration schedule on Prairie as well as other producers in this field served by Humble without a contract. Prairie has three 55's completed and filled with oil in the field proper, and has four of the five completed 55's filled with oil on its Upton County tank farm. Prairie is adding four more tanks on the latter farm, and still has some production shut in on its Lassiter-University lease.

A complete survey of all large steel tankage in use, under construction and contracted for in the West Texas district on December 10, 1927, is listed in the accompanying table.

A complete survey of all large steel tankage in use, under construction and contracted for in the West Texas district on December 10, 1927, is listed below by counties:

	No.-completed Tanks	No. Tanks Bldg.	Size Tanks In Bbls.	Location, Section, Block and Survey.
Crane County—				
Atlantic Oil Prod. Co.	6	..	55,000	SE¼ Sec. 46, Blk. 30, Univ. Lands.
Atlantic Oil Prod. Co.	6	..	55,000	NE¼ Sec. 45, Blk. 30, Univ. Lands.
Atlantic Oil Prod. Co.	2	..	74,000	NE¼ Sec. 45, Blk. 30, Univ. Lands.
Church-Fields-Weekly	2	..	55,000	E½ SW¼ Sec. 39, Blk. 30, Univ. Lands.
Eastland Oil Co. et al.	1	..	64,000	W½ NW¼ Sec. 47, Blk. 30, Univ. Lands.
Eastland Oil Co. et al.	4	..	55,000	W½ NW¼ Sec. 47, Blk. 30, Univ. Lands.
Eastland Oil Co. et al.	12	..	55,000	E½ E½ Sec. 44, Blk. 30, Univ. Lands.
Eastland Oil Co. et al	4	..	55,000	NE¼ Sec. 41, Louis Yarbrough Survey.
Gulf Pipe Line Co.	2	..	80,000	NE¼ Sec. 202, Blk. "F", CCSDRGNG Sur.
Humble Pipe Line Co.	2	..	55,000	NE¼ Sec. 216, Blk. "F", CCSDRGNG Sur.
Humble Oil & Ref. Co.	6	..	55,000	NW¼ Sec. 36, Blk. 30, Univ. Lands
Independent Oil & Gas	1	1	55,000	E½ NW¼ Sec. 46, Blk. 30, Univ. Lands.
Landreth Prod. Corp.	31	..	55,000	Strip Lease, Survey 10, Blk. "J-C."
Landreth Prod. Corp.	5	7	80,000	NE¼ Sec. 8, Blk. "X", CCSDRGNG Sur.
Magnolia Pipe Line Co.	4	..	55,000	SE¼ SE¼ Sec. 44, Blk. 30, Univ. Lands.
Pecos Oil Company	6	..	55,000	SW¼ Sec. 47, Blk. 30, Univ. Lands.
Pecos Oil Company	1	..	37,500	SW¼ Sec. 47, Blk. 30, Univ. Lands.
Prairie Oil & Gas Co.	3	..	55,000	NE¼ Sec. 47, Blk. 30, Univ. Lands.
Simms Oil Company	16	..	55,000	NE ¼ Sec. 45, Blk. 30, Univ. Lands.
Simms Oil Company	6	..	55,000	SE¼ Sec. 46, Blk. 30, Univ. Lands.
Southern Pipe Line Co.	1	..	55,000	NE¼ Sec. 41, Louis Yarbrough Survey.
The Texas Company	1	..	37,500	W¼ Sec. 22, Blk. 35, H&TC Ry. Survey.
Crockett County—				
Humble Pipe Line Co.	1	..	55,000	S½ Sec. 2, Blk. "BB", N. A. Miller Sur.
Howard County—				
Magnolia Pipe Line Co.	3	2	55,000	SW¼ Sec. 12, Blk. 30, T&P Ry. Sur, T-1-S.
Jones County—				
Phillips Pet. Co.	1	..	55,000	NW¼ Sec. 19, Blk. 19, T&P Ry. Survey.
Midland County—				
Atlantic Oil Prod. Co.	2	12	80,000	N½ Sec. 40, Blk. 38, T&P Ry. Sur. T-1-S.
Atlantic Oil Prod. Co.	3	..	55,000	N½ Sec. 40, Blk. 38, T&P Ry. Sur. T-1-S.
Gulf Pipe Line Co.	6	..	80,000	S½ Sec. 41, Blk. 38, T&P Ry. Sur. T-1-S.
Gulf Pipe Line Co.	4	..	55,000	S½ Sec. 41, Blk. 38, T&P Ry. Sur. T-1-S.
Magnolia Pipe Line Co.	12	5	55,000	Sec. 43, Blk. 38, T&P Ry. Sur. T-1-S.
Mitchell County—				
Col-Tex Refining Co.	1	..	55,000	S½ Sec. 42, Blk. 26, T&P Ry. Survey.
Col-Tex Refining Co.	1	..	35,000	S½ Sec. 42, Blk. 26, T&P Ry. Survey.
Col-Tex Refining Co.	3	..	15,000	NE¼ Sec. 21, Blk. 28, T&P Ry. Sur. T-1-N
Magnolia Pipe Line Co.	6	..	55,000	W½ Sec. 47, Blk. 29, T&P Ry. Sur. T-1-N.
Pecos County—				
The California Co.	1	..	55,000	Sec. 34, Blk. 194, GC&SF Ry. Survey.
Humble Pipe Line Co.	2	..	64,000	E½ Sec. 58, Blk. 1, I&GN Ry. Survey.
Humble Oil & Ref. Co.	..	1	55,000	Sec. 36, Blk. 194, GC&SF Ry. Survey.
Illinois Pipe Line Co.	2	..	55,000	E½ Sec. 61, Blk. 1, I&GN Ry. Sur.
Illinois Pipe Line Co.	2	..	55,000	E½ Sec. 62, Blk. 1, I&GN Ry. Survey.
Roxana Petroleum Corp.	1	..	80,000	N end Sec. 61, Blk. 194, GC&SF Ry. Sur.
Simms Oil Company	1	2	55,000	Sec 103, T. C. Ry. Survey.
Reagan County—				
Big Lake Oil Co.	12	..	55,000	Sec. 11, Blk 2, Univ. Lands.
Humble Pipe Line Co.	8	..	64,000	S½ Sec. 11, Blk. 11, Univ. Lands.
Reagan County Pur. Co.	16	..	80,000	SW¼ Sec. 11, Blk. 11, Univ. Lands.
Texon Oil & Land Co.	9	..	55,000	Secs. 35 & 36, Blk. 9, Univ. Lands.
Upton County—				
Gulf Production Co.	1	..	80,000	NE¼ Sec. 2, GC&SF Ry. Survey.
Humble Pipe Line Co.	17	..	55,000	N¼ Sec. 65, Blk. 35, H&TC Ry. Survey.
Illinois Pipe Line Co.	1	..	55,000	NW¼ Sec. 19, Blk. 1, MK&T Ry. Survey.
Illinois Pipe Line Co.	1	..	55,000	NE¼ Sec. 34, Blk. 1, MK&T Ry. Survey.
Marland Pipe Line Co.	6	..	80,000	E¼ Sec. 64, Blk. 35, H&TC Ry. Survey.
Marland Pipe Line Co.	4	..	55,000	E¼ Sec. 64, Blk. 35, H&TC Ry. Survey.
Prairie Oil & Gas Co.	5	4	55,000	Sec. 31, Blk. 42, T&P Ry. Sur. T-5-S.
Roxana Petroleum Corp.	..	8	80,000	Sec. 7, GC&SF Ry. Survey.
Southern Pipe Line Co.	2	..	55,000	NW¼ Sec. 64, Blk. 35, H&TC Ry. Sur.
Texas Pipe Line Co.	1	..	64,000	W¼ Sec. 66, Blk. 35, H&TC Ry. Sur.
T&P Coal & Oil Co.	1	..	80,000	Sec. 5, GC&SF Ry. Survey.
T&P Coal & Oil Co.	1	..	55,000	Sec. 5, GC&SF Ry. Survey.
Val Verde County—				
Illinois Pipe Line Co.	25	..	80,000	Sec. 9, Blk. B-3, I&GN Ry. Survey.
Ward County—				
American Petroleum Co.	4	6	55,000	W½ SE¼ Sec. 81, Blk. "A", GMMB&A Sur.
Independent OG Co.	..	2	55,000	SE¼ SW¼ Sec. 60, Blk. "F", GMMB&A Sur.
Southern Pipe Line Co.	4	..	80,000	Sec. 20, Blk. "F", GMMB&A Survey.
Southern Pipe Line Co.	3	..	55,000	Sec. 20, Blk. "F", GMMB&A Survey.
Southern Pipe Line Co.	1	..	25,000	Sec. 20, Blk. "F", GMMB&A Survey.
Southern Pipe Line Co.	1	..	20,000	Sec. 20, Blk. "F", GMMB&A Survey.
Winkler County—				
American Petroleum Co.	2	..	10,000	SE¼ Sec. 35, Blk. B-5, PSL Survey.
Atlantic Oil Prod. Co.	2	3	80,000	NE¼ SE¼ Sec. 31, Blk. B-5, PSL Sur.
Gulf Prod. Co.	2	4	80,000	NW¼ ec. 34, Blk. B-5, PSL Survey.
Humble Oil & Ref. Co.	2	..	64,000	Sec. 8, Blk. B-12, PSL Survey.
Independent O&G Co.	2	..	55,000	E½ NW¼ Sec. 41, Blk. B-5, PSL Sur.
Independent O&G Co.	2	..	55,000	W½ SW¼ Sec. 34, Blk. B-5, PSL Sur.
Landreth Prod. Corp.	2	1	80,000	SW¼ Sec. 29, Blk. B-5, PSL Survey.
Magnolia Petroleum Co.	1	..	80,000	W½ NE¼ Sec. 29, Blk. B-5, PSL Survey.
Magnolia Petroleum Co.	2	1	55,000	N½ Sec. 6, Blk. B-11, PSL Survey.
Maxwell & Turman	..	1	55,000	E½ NE¼ Sec. 29, Blk. B-5, PSL Sur.
Roxana Petroleum Corp.	2	..	80,000	N½ SW¼ Sec. 40, Blk. B-5, PSL Sur.
Southern Pipe Line Co.	3	..	55,000	N½ NE¼ Sec. 6, Blk. B-12, PSL Sur.
The Texas Co.	1	1	55,000	SE¼ Sec. 34, Blk. B-5, PSL Survey.
Texon Oil & Land Co.	1	..	80,000	SW¼ NE¼ Sec. 7, Blk. B-12, PSL Sur.

Mid-Continent Scouts Re-Organized

Tulsa. — The Mid-Continent Oil Scouts Association, which was organized several years ago for the purpose of promoting wider acquaintanceship, to increase good fellowship among its members and to create a higher standard of efficiency, but which for some time has been inactive, was reorganized at a meeting of the board of directors held at the Mayo Hotel, here, December 3. A new constitution and by-laws have been adopted and the policies of the association somewhat rehashed for the purpose of putting the organization over in first class style henceforth.

According to article 2 of the constitution, the association does not propose to dictate in any manner or form the policies of the respective companies toward employes holding membership in the organization; but rather it is their desire to co-operate to the fullest degree with the companies, to promote a better understanding between employes and to strive to give better service and greater efficiency.

The active membership of the association is to be extended to all men in scouting, land, or lease work, employed by officially recognized oil and gas companies. Honorary membership is to be extended only upon the approval of the board of directors, which is to be composed of one leading scout in each of the various districts in the Mid-Continent territory.

The national convention of the association is to be held in May, 1928, according to a vote taken at the reorganization meeting December 3, and a committee was appointed to confer with the chambers of commerce in a number of cities. Shawnee, Oklahoma City and Guthrie have thus far been mentioned as being favorably located for this convention.

A special meeting of the board of directors was called for January 7, to be held at the Roland Hotel in Bristow, Oklahoma, at which final arrangements will be made for the convention.

Conservation Foremost Subject at Chicago Meeting

A. P. I. accepts legislation as means of controlling situation—Division of production engineering created

By SPENCER W. ROBINSON

THOSE present at the meeting of the American Petroleum Institute in Chicago last week were not at a loss to find something among the wide range of subjects discussed that was new or of specific value, whether that subject pertained to production engineering, refining technology, transportation, distribution or any of the many subdivisions of these departments.

It was by far the largest and most constructive program ever attempted by the Institute, and, from a standpoint of importance, the far-reaching decisions made there, which cannot be properly classified at this time, may prove historical markers in the future progress of the industry.

The many and varied discussions arranged for the meeting dealt with specific problems of some particular phase of operation, but in the main these discussions formed the background for the three major projects before the Institute for attention. These projects are standardization, Technical Development and legislation, all having direct and important bearing upon the industry's greatest problem today: that of conservation.

Division on Production Engineering

Designating technical development as a practical means of conservation, the Institute directors approved a recommendation for the organization of a division to be known as Development and Production Engineering.

It had been suggested by the Committee on Technical Relationships that a Division of Refining Technology also be established, but this organization was not deemed advisable at this time by the committee appointed at the opening of the meeting to consider such plans.

In recommending the Division on Development and Production Engineering, the committee composed of H. R. Kingsbury, R. W. Stewart, W. N. Davis, George S. Davidson and Wallace E. Pratt, urged that this division be approved in principle for the reason that the contemplated work of the new division is extremely important in connection with current problems on oil conservation.

It was approved that membership in the new division will be open to all interested members of the A. P. I. on the payment of $2.50, the dues for the first year. The amount of subsequent dues is to be determined by the executive committee of the Institute at some later date.

Accepts Legislation

The Institute formally accepted legislation as a means of preventing the waste of gas in the production of oil when the Board of Directors accepted and filed the report of the Marland Committee urging the enactment of laws that would permit closer cooperation and if necessary the unit operation of oil pools.

Earlier in the week the board adopted the report of the Committee on Agreements which proposed legislation that would make it lawful for operators or others at interest to make agreements whereby the production of crude petroleum could be diminished or postponed during periods of over-production or actual economic waste. This committee also seeks aid or relief from the federal congress through an enactment that would revise the Interstate Commerce rulings making it possible for curtailment when the production in the pool or pools affected exceeds the transportation facilities or when and so long as the production in the United States together with imports exceeds consumption and exports.

A definite program for obtaining this legislation has not been outlined by the Institute, but it is expected that important announcements will be made along this line within a short time.

Doherty Back in Line

Added weight was given to the new legal developments of the Institute when it was learned that Henry L. Doherty, father of the "Unit Plan," had rejoined the ranks of the A. P. I. after a full explanation of the program outlined by the Institute was made to him by Mark L. Requa and Earl Oliver who called on him at Battle Creek, Michigan, just prior to the opening of the meeting in Chicago.

Mr. Doherty wired officials of the Institute that he was willing to sink his own views and personality and accept other plans than his own if it will bring about the conservation of the nations' oil resources and the betterment of conditions in the industry. He said that he regretted that some one had not kept him better posted on what was going on, and emphasized that if any one can find a solution to present problems other than the ones he has advocated he will be ready to support them.

Sponsors Wider Utilization

For the first time, the Institute really threw its weight behind the movement for a more diversified application of petroleum products to the industrial and commercial life of the day. A committee composed of D. E. Buchanan, Henry M. Dawes, Axtell J. Byles, Amos L. Beatty and J. Howard Pew, was appointed to investigate the matter from all angles and report to the Board or Executive Committee as soon as possible.

A committee was also appointed to consider the desirability of making a cooperative survey of marketing conditions. This committee is made up of P. M. Miskell, chairman; L. V. Nicholas, H. B. Earhart, H. R. Gallagher and Henry M. Dawes.

At the request of the Oil Heating Institute, the Board of Directors selected three members to study the work of the Oil Heating Institute and to make recommendations to the Executive Committee concerning the endorsement of the work. Herbert L. Pratt, J. Howard Pew and W. M. Irish were appointed to serve on this committee.

Standardization

Definite progress was reported by the several committees working on standardization of oil field equipment, and this division of the A. P. I. is now preparing to tackle the larger problem of seeing that these standards are adopted and

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A. P. I. Officers and Executive Committee

The Board of Directors of the American Petroleum Institute elected the following officers of the Institute for the ensuing year: E. W. Clark, vice-president of Union Oil Co. of California, Los Angeles, president (re-elected); A. J. Byles, president, Tide Water Associated Oil Co., vice-president representing manufacturing; A. C. Macbeth, Southern California Gas Co., vice-president representing production; F. B. Fretter, president, National Refining Co., vice-president representing distribution; Amos L. Beaty, chairman of the board, The Texas Co., treasurer; Lacey Walker, assistant treasurer; R. L. Welch, secretary and counsel; W. R. Boyd, Jr., assistant secretary and counsel.

The following executive committee was elected: The above three vice-presidents and the last retiring president, W. S. Farish, president, Humble Oil & Refining Co.; George S. Davison, Gulf Oil Corporation; George H. Jones, Standard Oil Co. (New Jersey); H. L. Doherty, H. L. Doherty & Co.; J. Howard Pew, Sun Oil Co.; Robert W. Stewart, Standard Oil Co. of Indiana, and E. W. Marland, Marland Oil Company.

Institute Seeks Laws to Permit Unit Operation

Marland Committee on Prevention of Waste of Gas proposes such measures; report accepted at Chicago

By SPENCER W. ROBINSON

CHICAGO.—The Board of Directors of the American Petroleum Institute made a clean sweep of all business slated for the meeting here last week when an acceptance was finally made of the report of the Marland Committee on the Prevention of the Waste of Gas. Action on this report was justly heralded as the most important business before the directors at Chicago, and a final decision was not expected by many at that time.

Previously, the board had reported favorably on the recommendations of the Committee on Agreements which, like the Marland report, urged a program of legislation.

The board's acceptance of the report of the Marland Committee and its subsequent resolution, however, definitely establishes that body as not only favoring but actively sponsoring legislative enactment for the prevention of waste in the production of oil. Study of the report occupied the most of two days and a decision was not reached without some protest from those who still hold the opinion that the evils of over-production can be solved within the industry.

It was found by the committee and emphasized by the board that the waste of gas cannot be prevented in an oil pool where there is a diversified ownership, and with this fact established it was recommended that proper laws be enacted by the several oil producing states to permit closer cooperation or if necessary the unit operation of pools.

This led to the adoption of the following resolution and the filing of the report of the Marland Committee:

Resolution Adopted

"Whereas, The prevention of the waste of natural gas found in oil producing formations is on paramount importance in connection with the economical production and conservation of oil, and

"Whereas, The waste of gas cannot be prevented in an oil pool where there is diversified ownership, so long as any one operator, through ignorance of the above principle or through selfish disregard for the correlative rights of his neighbors or through desire to capture more oil than underlies his property, disregards the above principle and continues to waste gas and refuses to cooperate with his neighbors in adopting preventive measures;

"Now, therefore, be it resolved, That we, the Board of Directors of the American Petroleum Institute, favor the enactment of laws to prevent the waste of such gas by the various oil producing states in which natural gas is being unnecessarily wasted."

Committee Continued

Just what plans will be pursued by the Institute to accomplish this result have not been announced, but any program outlined will take into consideration the further activity of the Marland Committee which it was voted to continue, as well as the advice of the Committee on Agreements, it is believed.

The preliminary summary of the Marland Committee is based on the conclusion "that the conservation of gas in connection with the production of oil is of paramount importance and that the data assembled by the various sub-committees substantiated this conclusion by the following recognized facts:

(a) Gas is the chief expulsive agent in the majority of cases. It is recognized, however, that there are other expulsive forces, among which is the natural water drive.

(b) The amount of gas dissolved in crude oil is in direct proportion to gas pressure.

(c) Natural gas reduces the viscosity of the oil in proportion to the amount and nature of the gas dissolved.

(d) Natural gas in solution reduces the surface tension of the oil.

(e) Any reduction in viscosity and surface tension reduction of the forces tending to retain the oil in the sands.

(f) Friction of oil passing through the sand is materially reduced through reduction of viscosity.

(g) Reduction in the amount of gas dissolved in crude oil as a result of reduction in rock pressure increases the viscosity, therefore, waste of gas indicates decrease in ultimate production.

(h) The comparison of production decline curves of wells shows a better sustained production of oil in wells where gas is efficiently used. By such efficient methods, there is produced a longer period of flowing life, a more economical production, and in the majority of cases, less gas is produced per barrel of oil."

This summary briefly expresses the views established by the technical subcommittee which at the suggestion of the Marland Committee has given the board a more detailed report on its findings in the study of the prevention of the waste of gas in the production of oil. This report will be found elsewhere in this issue of THE OIL WEEKLY.

In submitting its summary to the directors, the Marland Committee proposed the following resolution:

"Resolved, That we submit a report to the directors of the American Petroleum Institute setting forth the functioning of this committee since its creation by the board in the manner and form as heretofore set forth.

"Resolved, That we reiterate our opinion that the prevention of the waste of gas is of paramount importance in connection with the economical production and conservation of oil.

"Resolved, That we suggest to the Board of Directors of the American Petroleum Institute that appropriate resolutions should be passed by that board, calling upon the industry to adopt every reasonable and practical means to effect the conservation of natural gas in oil bearing formations in the interest of economies in production costs increase ultimate recovery and in the interest of conserving our supplies of petroleum to meet the demands of consumption, and to the end that proper recognition of the correlative rights of the land owners and lease owners in a given pool may be obtained.

"Resolved, That we suggest to the Board of Directors of the American Petroleum Institute that it, by appropriate resolutions encourage the cooperative development of oil pools, wherever found with diversified ownership, as the best means of effecting the greatest economies in the production of oil and as the best means of conserving our petroleum resources, and that to this end the Institute should now encourage the passage of necessary state legislation to permit the cooperative development of oil pools where there is diversified ownership of lands and where such cooperative development is necessary in the interest of the protection of the correlative rights of owners and in the interest of economical production and conservation of oil .

"Resolved, That we suggest to the Board of Directors of the American Petroleum Institute that it should impress upon its members in the several states where oil is being produced the need for state legislation, or other state regulatory measures, to permit and require the producers of oil and gas in those states to adopt measures to prevent the waste of natural gas found in oil sands.

"Resolved, That this committee suggests that the technical sub-committee of their committee be continued indepen-

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Technical Report Shows Need of Conserving Gas

Much valuable data is furnished by the Technical Sub-committee to the Marland Committee report

THIS report is a summary of the voluminous data submitted, in detailed reports, in committee discussions, and in a three-day hearing at Ponca City, by more than 100 production engineers, geologists, chemists, and physicists regarding the importance of natural gas in oil production and the means for utilizing it most efficiently. These men come from all the important fields of the United States, and represent three Federal agencies, nine universities, the National Research Council, 34 oil companies, and a number of individual activities.

The data show conclusively that the conservation and efficient utilization of gas are of paramount importance in the conservation and economical production of oil. Gas dissolved in oil makes the oil more fluid, and more capable of movement through the pore spaces of the reservoir rock to the well; the energy stored in the same gas is the chief force behind that movement. The more gas the easier the oil moves and the greater the force available to move it. To dissipate gas from an oil sand is to lessen the propulsive force and increase the need for it. The energy and solution values of oil field gas are of tremendous importance. The proper utilization of gas results in greater and more orderly oil recovery at lower cost.

The data show that the way to use gas to the best advantage is to use it in its original state, and that the conditions in a sand, once destroyed, can never be completely restored; but they show also that the injection of gases into many fields has had highly beneficial effects.

The data show that many methods are of value in conserving gas and utilizing it efficiently, that the effectiveness of each method varies in different fields and with different wells, and that no single method or group of methods can be universally applied. Each well should be studied as an individual problem and to it should be applied the combination of methods found to give the best results.

The data show finally that many, probably most, of the best methods for gas utilization can be practiced advantageously only when they can be applied systematically to a whole field; that competitive drilling in individual fields almost inevitably leads to gas waste and lessened ultimate oil production; and that either complete co-operation or unit operation is the ideal operating condition for the conservation of both gas and oil.

Occurrence of Oil and Gas

Oil and gas originate from various organic materials deposited in sediments and converted into oil and gas by heat and pressure during geologic processes. Differences in the character of the organic material, differences in the amount and duration of the heat and pressure, and differences in the chemical environment result in hydrocarbons ranging from the lightest gas to the heavies asphalt.

These oils and gases are found concentrated on rock-folds, known as geologic structures, in reservoir rocks of greater or less porosity, thickness, and homogeniety. The reservoir rock may be, for example, a single sandstone bed a few feet thick and of uniform porosity, a porous lense in a limestone or a great body of poorly consolidated sediments made up of relatively thin and often lenticular beds of pervious sand and impervious shale. The great variety of reservoir rocks gives an equal variety of production conditions. The reservoir pressure in the homogeneous sandstone is likely to be the same throughout the field; in the limestone bed variations in porosity may induce variations in the pressure; in the alternating sediments the reservoir pressure, the character of the hydrocarbons, and the water conditions may be different in each sandstone layer and in every part of the field. Whatever the character of the reservoir it is commonly referred to as a "sand."

Some productive sands contain oil and gas; some contain gas alone; oil sands without gas are practically unknown. This summary is concerned only with reservoir rocks carrying oil and greater or less amounts of gas.

Gas may be present in an oil sand in one or all of four phases; (a) free; (b) dissolved in the oil; (c) as a liquid, becoming a gas when the pressure is lowered, and (d) adhering to the surfaces or interfaces between the gases and the liquids, the fluids and the solids in a process known as absorption. Each of these phases has its bearing on the efficient utilization of the gas.

The Importance of Gas in Oil Production

Natural gas in most oil sands is the most important agent in the recovery of oil. In some fields water is the all important expulsive force and in some gravity assists in production, but in most fields water and gravity are of minor importance when compared to the work of gas.

The gas may, and as far as possible should, be utilized as "original gas" before being exhausted from the sand, but when the original gas has been wholly or partly dissipated gas may advantageously be injected.

Value of Original Gas

Gas in an oil sand should be looked on primarily as a source of energy rather than as a substance. This stored energy is the prime motive force for the extraction of the oil from the reservoir. It drives the oil through the minute pore spaces of the reservoir rock to the well and lifts or helps to lift it to the surface.

Gas has a second and almost equally important value—its value in increasing the fluidity of the oil. As already noted, part of the gas in an oil sand may be in liquid form; part may be dissolved in the oil. The amount that may be dissolved depends upon the character of the oil and the character of the gas, and is proportional to the temperature and the pressure.

The greater the amount of dissolved and liquid gas in an oil the lighter the oil, the less viscous, and the lower its surface tension. Specific gravity, and surface tension of the oil are all lessened by the solution of the gas, and as these are lessened the mobility of the oil is increased. Rendered more fluid by the gas, the oil can pass through the intricate, tortuous interstices of the reservoir and find its way to the area of lower pressure at the well. Greater fluidity, greater mobility, greater ease of movement—these represent the solution value of gas in oil.

It will be noted how these two values supplement one another. The gas makes the oil easier to move; the energy in the gas moves it. These two properties of gas are of prime importance in the production of oil.

When a well penetrates a petroleum reservoir theretofore untouched gas pressure is released about the well and oil and gas begin to flow through the reservoir spaces toward the point of lowered pressure. As the fluid moves toward the well there is a progressive drop in pressure. With the drop in pressure the free gas expands and drives the oil through the sand; the dissolved gas comes out of solution

and becomes free gas; the liquified gas vaporizes and becomes free gas, and the additional free gas also helps to drive the oil to the well. The progressive liberation of energy increases the velocity of the fluids and overcomes friction as they move through the rock voids toward the point of egress.

It is logical to assume that those winding pore channels which have the greater and more uniform cross section will carry a more mobile fluid, a fluid with a greater proportion of gas, than the other channels, and that this gas proportion is augmented by distillation from neighboring channels. The natural gas in endeavoring to escape from the reservoir in such a way as to reduce the stored energy attempts to clear those larger and more uniform pore channels of petroleum, which, when cleared, will permit the free egress of the remaining gas to and out of the well, leaving a maximum of petroleum in the reservoir. If the pressure is too rapidly reduced by permitting too rapid escape of gas from the well the proportion of oil left in the reservoir is increased.

As the pressure is lowered and the dissolved and liquid gas leave the oil, the oil becomes more viscous and increasingly difficult to move and this augments the tendency to leave more oil in the reservoir if the pressure is too rapidly exhausted.

As the production declines the proportion of gas produced with the oil—the gas-oil ratio—increases, and the gas energy declines below the point necessary to flow the well. Thus the flush or flowing period of the field passes.

As the field declines pressures are lower than during the flush period and oil is not so plentiful or so mobile. Gradually oil accumulates in the bottom of the well and the surrounding sand and obstructs the passage of the gas. Pressure is built up behind the oil and when this pressure is great enough the well again flows, the sand near the well is again depleted, and the cycle is repeated. This is the period of intermittent flow.

Finally the amount of oil reaching the well and the amount of gas and gas pressure behind it are not great enough to cause even intermittent flow. Gravity begins to play a more important part in the movement of the oil, especially if the reservoir body be thick. The oil is less mobile, all the gas energy is utilized in bringing the oil to the well, and artificial means must be employed for lifting it. The well has reached the pumping stage.

It is readily seen that throughout the well history the gas present in the oil has facilitated movement toward the well, and that, except for the part that may have been played by other forces such as water and gravity, movement has depended entirely on the gas energy.

In many fields the gas pressure has played a third important role in holding back edge or bottom water or both and preventing its encroachment into the productive parts of the sand. When the gas pressure declines below the hydrostatic head of the water friction alone delays the water in flooding the field.

Injected Gases

At almost any stage of the field's depletion gas (either natural gas or some other) may be injected into the sand in an attempt partially to restore original conditions and thus increase both the immediate and the ultimate oil production. It is possible by such injection of gas to restore in part the earlier gas pressures and thus rebuild the energy value stored in the field. There is grave doubt whether the solution value of the gas can be restored.

It seems unlikely that injection of gas restores anything approximating the original conditions. The introduced gas is nearly always lacking in fractions which will liquify at the restored pressures. The area of contact between the gas and oil is relatively small and diffusion of the gas through the oil apparently slow. Gas is probably not re-adsorbed at the liquid-solid interfaces. Thus three of the four original phases of the gas are seemingly not recreated; the energy effect of free gas is restored, but the energy effect of the adsorbed gas and the energy and solution effects of the liquid and dissolved gases are not fully restored. Despite these facts, however, the injection of gases is one of the best methods for rejuvenating many fields. The energy effect of the free gas is alone an important asset.

As to the relative values of various gases, the injection of natural gas, preferably of the same composition as that taken from the reservoir, would go farthest toward restoring original conditions of energy and solution. The introduction of identical gas is difficult, however, because the compression of the gas for injection denudes it of some of those constituents which would otherwise liquify in the reservoir and increase the mobility of the oil.

There is some evidence that the driving effect of air is at least as great as that of gas. Air oxidizes some oils and makes them more viscous, and hence more difficult to move through the pores. Under certain conditions the air forms explosive mixtures unsafe for fuel purposes, and in many fields, especially those in which sulphur is present, it increases corrosion of the casing and tubing.

Flue gas resulting from the combustion of natural gas may be treated and used for injection purposes. It is free from most of the corrosion and explosive disadvantages of air, but its effect on the viscosity is about the same.

As already said, the injection of gases into depleted sands is in many fields an effective method of increasing production, but it cannot compare in effectiveness with the efficient utilization of the original gas.

The Efficient Utilization of Gas in Oil Production

The purpose of the efficient utilization of gas in oil production is to produce the most oil at the least cost in the most orderly manner. The most efficient method is the one making the greatest effective use of the energy and solution values of the gas. It is the method that will produce the greatest amount of oil with the minimum expenditure of gas energy. The cubic feet of gas produced with each barrel of oil, known as the gas-oil ratio, is a working index, but not an infallible index, of the efficiency of any method; in general the lower the ratio the greater the efficiency.

No one method can be prescribed; the method most effective with one well may fail with another. The variations in thickness and porosity of reservoir sands, in character of gas and oil, in hydrostatic head, in gas pressure, and many other factors necessitate the study of each field and even of each individual well. This is the province of the production engineer. The methods herein briefly discussed are those that have given favorable results in various places and under various conditions.

Methods During Development

Careful study should be giving to the spacing of wells. Too wide spacing gives the gas too great a distance to propel the oil, and results in an adequate drainage and lower recovery of oil per acre. It is obvious, of course, that too close spacing gives an excessive development cost per acre.

The timing of wells should also be given consideration. The ideal method of utilizing gas energy to the fullest extent would be to drill all the wells necessary to drain a structure, cap each well brought in until the boundaries of the field are determined, and then put all wells on production at the same time. This is possible, of course, only when an entire structure is handled under a single development and production program.

Careful thought should also be given other drilling problems, such as the depth to which the reservoir should be penetrated; the complete cleaning of mud from the face of the sand; the placing of shots so as to avoid the shattering of impervious beds above or below the reservoir; and the setting of casing to separate all oil, gas, and water-bearing strata and, when gas is present in the same reservoir rock above the oil, to confine it so that its energy is directly downward to and through the oil rather than laterally to the well.

Pressure Control

The retention of fluidity and energy and the production of the greatest volume of oil with the smallest reduction in rock pressure are both accomplished by the proper adjustment of the amount of pressure held on the

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Will Educate Field on Proper Use And Care of Equipment

Standardization Division of A. P. I. issues posters illustrating best methods and practices

CHICAGO—With the work of the various committees on the standardization of oil field equipment progressing at a rapid stride this division of the American Petroleum Institute is now finding time to concentrate its activities on the more vital problem; that of practical field application. It was this angle of the standardization movement which occupied the attention of most of those in attendance at the eighth annual meeting of the Institute held here last week.

The extent to which work has advanced along these lines was indicated by the completed recommendations for practices to be observed in the use of A. P. I. equipment which were presented in the form of sample posters for the approval of the committees and which have been adopted for general distribution.

These codes on recommended field practice have been drawn for the handling of Manila Cordage, Wire Rope, belting and for attaching sockets to wire rope.

It is the idea of the Standardization Division to have similar codes drafted for all standardized equipment and posters, suitable for display in field warehouses, derricks and other points of contact with the operating departments of producing companies, will be made and generally circularized.

Samples of the four posters presented at the meeting here last week have been reproduced herewith in order that those interested in furthering this activity can become familiar with the work of the Division of Standardization along these lines.

Aside from this new movement inaugurated at the Chicago meetings, the reports of the various committees indicate remarkable development in the selecting of standards for the several types of equipment on which specifications have not been completed.

Final specifications were adopted at this meeting on steel storage tanks as well as working barrel parts while additional specifications were adopted on pump equipment items. These specifications will be issued in the near future by the Division of Standardization.

It was decided to hold the usual semi-annual meeting at Colorado Springs on June 18, 19 and 20.

The reports of the various committees at the eighth annual meeting held here on December 6, 7, 8 and 9 follow:

Belting

A. H. Riney, Chairman

The main purpose of the sessions at this meeting has been to examine carefully all of the existing specifications on Belting with a view of accepting criticism from every angle in the hope that final forms could be adopted at this time. In accordance with this plan the initial session of the Engineering Sub-Committee was held to discuss the two remaining tentative specifications, namely, those covering Solid Woven Hair and Solid Woven Cotton types. At the same time representatives of the manufacturers of all six types of belting met with the purpose in mind of suggesting revisions for these specifications. Due to the fact that there has been some objection regarding the limitation of minimum elongation of belting under tests, the following motion was passed:

That the Engineering Sub-Committee of the Belting Committee go on record as feeling that although they are specifying on best types of present belting, we do not discourage development of new belting of any type which have initial elongation curves falling below the minimum prevailing specifications.

The fact that manufacturers have gone thoroughly into the study of the various types of belting was clearly evidenced in the separate sessions which were held by the Engineering Sub-Committee and the representatives of each particular type of belting. As a result of these individual conferences, several revisions are to be made in the present specifications, most of them being only of minor importance.

The reports of the special engineering assignments on testing methods for belting, on belting records, on belting markings and on belting clamps, indicate that considerable progress is now being made on practical refinements along the subject of belting specifications.

It is recommended that the Belting Committee be authorized to continue their investigations of the subjects now being considered in their present work in addition to additional tests to completely verify present belting specifications as deemed necessary.

The following are some of the most important accomplishments of this session:

1. The completion of the specifications for Solid Woven Cotton and Solid Woven Hair Belting as final, which now makes all of the specifications for belting final.

2. The adoption of standard equipment and methods for uniform testing of belting.

3. Final agreement with the Pumping Committee and the Rigs and Derrick Committee for the belting center between band wheel and driving pulley of 35 and 40 feet and for the centers between motor or engine pulleys and counter shafts at 18 feet.

The following items are the most important ones upon which future attention will be directed:

1. Further study of the elastic properties of belting.

2. Development of fatigue tests for belting.

3. Additional standardization of the equipment and methods of testing.

4. Formulation of proper field usage standards, such as design of clamps and care of belting under operating conditions.

5. Preparations for use of manufacturers and users of standard test forms for presenting belting tests results.

6. The supplying of standard forms for users for recording field performances of belting.

The above report is hereby submitted for the approval of the General Standardization Committee.

Oilfield Boilers

S. J. Dickey, Chairman

The committee on Standardization of Oilfield Boilers met with eight representatives present.

The following additions were made to the present specifications:

(1) Standard dimensions of handhole openings.

(2) Design of stack flanges.

(3) Location of pressure gauge opening.

(4) Several internal clearance dimensions.

Several minor changes were made in the lists of standard fittings to accompany A. P. I. boilers.

The following questions were referred to the District Committees:

(1) Shall we add a 100 H.P. boiler.

(2) Purchaser to specify desired operating pressure above that now specified.

(3) Making safety valve flange location optional.

The Manufacturers Committee was requested to furnish detail dimensional specifications for bonnets.

A special sub-committee was author-

ized to correlate the various material received into a recommended code covering the installation, operation and care of Oil Field Boilers, together with a summarized poster covering this.

The A. S. M. E. Boiler Code Committee reports final adoption of Code changes permitting the installation of larger domes when located over the barrel of the boiler.

Cable Drilling Tool Joints

Thos. Fleming, Jr., Chairman

A meeting of this committee was attended by 14 members of the committee, including the National Chairman and the National Secretary.

The chairman announced that from all reports received the use of cable tool standard joints was progressing quite favorably and that very few of the users had expressed dissatisfaction. He stated that to date a total of 630 A. P. I. cable tool joints, plug and ring gages, have been supplied to manufacturers and operators, and that a total of 48 individuals and firms have been licensed to use A. P. I. cable tool joint gauges. Practically every manufacturer in the United States is now turning out joints in accordance with these standards. It developed in the course of discussion, that in several localities the users of cable tools have insisted on maintaining certain dimensions of the wrench squares which are of minor importance, but which prevent the manufacturer from stamping the tools with the official A. P. I. designation. A resolution was adopted that the large operators insist on the purchase of cable tools which are strictly in accordance with the A. P. I. specification as the manufacturers are compelled to furnish equipment in accordance with the demands of the customer, and are therefore powerless to furnish A. P. I. joints unless specified.

The principal business before the meeting was the consideration of a code on proper care and use of cable drilling tool joints in the field, and also the consideration of the advisability of adding smaller sizes of joints to the existing standards.

Mr. George H. Jaques, chairman of a special committee on the preparation of a code, submitted a very comprehensive report, which covered quite thoroughly and in detail the proper care and use of tools in the field. Mr. Jaques' committee has been engaged for the last year in collecting information and compiling this code. On account of the importance of having the advice and knowledge of all those on

A. P. I. Instructions and Suggestions on Proper Care and Use of Wire Rope in the Field

Recommended Practice for Use and Preservation of Wire Rope

A-1. Socketing line into socket, clean wires and socket with acid and use zinc. Zinc must not be heated too hot. The rope is to be parallel with the axis of the socket for a distance of at least 5 feet.

A-2. All wire lines to give maximum life should be kept continually lubricated.

A-3. Wire line thimbles and clamps, when used as rope end attachments, should provide sufficient bearing so as not to put excessive strain at any point. Refer to Fig. 6 for the best method of attaching wire rope clips.

A-4. Recommend that field men use a proper apparatus when removing line from reel to drums. Reel apparatus should have a brake so that line can be tightly spooled on drums.

A-5. Do not strike wire line with hammer, derrick hatchets or crowbar or cause any unnecessary nicks or bruises on wire.

A-6. String blocks to give minimum wear against sides of grooves in sheaves and observe that all sheaves are in proper alignment and are true in bearings.

A-7. Keep line tightly and evenly wound on winding drums. Excessive speeds when blocks are running up light do much injury to wire rope.

A-8. Keep wire line grooves in sheaves to proper form by proper testing and refinishing, if necessary.

A-9. Hardened metal, such as manganese or special alloy steel, heat-treated, will best serve for grooves in sheaves. Grooves to be made to proper design and to be smoothly finished concentric with the bore or shaft.

A-10. All rotating sheaves should exert a minimum turning effort and should be properly lubricated.

A-11. Sheaves should be used only for the size of line for which they are grooved.

A-12. After stringing new wire rope on blocks and sheaves, run with light load for short time to set rope to working conditions. Use lubricant while so doing.

A-13. Sudden, severe stresses are injurious to wire rope and should be reduced to minimum.

A-14. Before cutting a wire rope, see that both ends are securely seized with wire each side of cut. (See Fig. 5.)

Fig. 6.

ATTACHING CLIPS TO WIRE ROPE

Above: Correct way to fasten wire rope with clips. Below: Two wrong ways to use clips for fastening wire rope. The rodde should be in contact with the long end of the wire rope and the U-Bolt in contact with the short end of the loop in the rope.

A-15. Experience has proved that fatigue and wear increase with speed; economy results from increasing load (within the safe limits) and diminishing speed.

A-16. Great care is to be taken to avoid kinks in a wire line.

A-17. Care should be taken that the proper form be maintained in the throat of groove in drilling clamps gripping the rope. Slipping of wire rope through drilling clamps should not be allowed.

A-18. The splicing of wire rope requires considerable skill. The instructions for splicing wire rope are too long to be given here. They will be found in the catalogues of most of the wire rope manufacturers. The sequence of the operation is carefully described and many clear illustrations show the progress of the work in the hands of experienced workmen. These illustrations give, in fact, most of the information which a person would receive by watching the making of a splice by skilled hands.

A-19. Jack up reel of rope as near as practicable to the drum and parallel to it with a direct lead to the drum or crown sheave wherever possible.

A-20. If winding rope direct from reel to drum, wind it in the same direction as it comes off from the reel, i. e., wind from the top of reel to top of drum, or from bottom of reel to bottom of drum. This will make the rope wind better and tighter.

A-21. Keep a tight tension on rope while it is being wound on drum.

A-22. Do not use a larger sized rope on sheaves that have been used for a smaller rope unless the sheave grooves are turned out to the larger size, or preferably install a new sheave with the proper size of groove.

A-23. Keep wire lines well lubricated with a good grade of lubricant, free from acid or alkali, and one that will penetrate and adhere to the rope. Do not used crude oil or cheap dope that contains chemicals that are injurious to rope and will cause deterioration or brittleness of the wires in the rope.

A-24. If wire line becomes covered with dirt or grit clean it off with a brush. This will save a lot of wear on the line.

A-25. Be sure that the fast sheave in rotary or cable tool work lines up with the center of the winding drum in order to secure the closest possible winding of the rope on the drum, bull and calf wheel shafts.

A-26. When replacing a worn out rotary line with a new line always wind it upon the drum under tension, using not over eight or ten stands of pipe in the hole. This will break rope in gradually by pulling this length of pipe. Do not operate a new line loosely wound on drum or when lowering pipe into the hole.

A-27. A suitably designed starting wedge integral with the drum or shaft is essential to secure helical winding of the first layer of rope on the winding drum, in addition to the usual precautions for tight winding.

A-28. In rotary cable tool drilling always use sufficient parts of rope to handle the casing or drill pipe. Do not overstrain a rope by using only four parts in the blocks when six should be used. Four parts of rope will handle approximately two-thirds as much load as six parts.

A-29. In rotary drilling when using a four part line in the casing block the surplus line should be carried on the calf wheel. In the absence of a calf wheel care should be taken to see that the clamps used to fasten the rope for dead ending do not kink, flatten, or crush the line. The use of properly designed clamps (not a U-bolt clip) will prevent this damage.

A-30. Do not use scored, corrugated or worn drum or shafts, as this will cause excessive wear on the line.

A-31. For existing drum conditions a rope speed for hoisting or lowering should never exceed 4000 feet of rope travel per minute. With larger drums proportionately higher speeds may be used. This speed limitation also applies to cable tool rigs.

Field Troubles and Their Causes

WIRE LINE TROUBLE	CAUSE
C- 1. Lines that are broken square off.	Overstrain, kink, damage or localized wear weakening one or more strands and loss of elasticity.
C- 2. One or more whole strands parting.	Overstrain, divider interference or local wear. If overstrain is sudden, it will cause a square-off break. In some cases it will show a necked-down condition of wires.
C- 3. Undue corroded condition of rope.	Lack of proper lubrication, very bad salt or alkaline water in hole. Periods of idleness between jobs.
C- 4. Ropes damaged by careless handling in hauling to wells or location.	Rolling reel over obstructions or dropping from truck or wagon on to any hard material that will result in distorting or damaging rope. The use of chains for lashing, or use of lever against against rope instead of flange.
C- 5. Ropes damaged by improper socketing.	Improper seizing which allows slack from one or more strands to work back into rope, or poor workmanship in socketing. Frequently shown by being untwisted at socket, loose or drawn.
C- 6. Ropes showing kinks, dog legs, and other distorted places.	These are all the result of improper handling or installation.
C- 7. Ropes damaged by hooking back slack too tightly to girt.	Operation of walking beam causes a bending action on wires at clamp and results in fatigue and cracking of wires, frequently before rope goes down into hole.
C- 8. Ropes used on a fishing job.	All such jobs overstrain a rope from the nature of the work.
C- 9. Ropes used for swabbing.	This operation usually overloads a rope and service is therefore irregular.
C-10. Ropes showing excessive wear in spots.	Kinks or bends in rope due to improper handling during installation or service, also wear against casing or hard shells or collars in hole.
C-11. Ropes broken starting bits or fighting caves.	Overstrain on rope causing excessive stretch and distortion.
C-12. Spliced lines.	A splice is never as good as a continuous piece of rope and slack is liable to work back and cause irregular wear in splice itself.
C-13. Injury due to slipping rope through clamps.	Abrasion and broken wires in a straight line. Drawn or loosened strands.
C-14. Ropes damaged by irregular or improper winding on shaft or drum.	Lack of attention when rope is installed, resulting in putting bends into rope.
C-15. Damage due to improperly fitted clamps.	Produces unequal pressure and distortion of wires and rope.
C-16. Ropes operated with sheaves or drums worn out or out of proper alignment.	This results in side wear on rope and cutting away of sheave flanges.
C-17. Ropes worn out in service.	Natural wear and deterioration, wires worn down on crowns. Also due to sharp sand and friction against casing.
C-18. Fatigue breaks in wires.	Excessive vibration due to poor drilling conditions, i. e., high speed, rope whipping.
C-19. Spiraling or Curling.	Allowing rope to drag or rub over pipe, sill, or any object, during installation or operation. Always use a block with sheave 18" diameter or larger when installing, (and tubing block is suitable).
C-20. Ropes showing excessive flattening or crushing.	In rotary drilling the pulling of stuck casings, loose winding on the drum or cross winding. In standard tools the taking off of your storage reel.
C-21. Core-popping.	Hitting fluid with excessive speed.
C-22. Whipping off of line.	Running too loose.

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the committee who were not present, and also to enable those members of the committee present who were not on Mr. Jaques' sub-committee, to study this code and make recommendations, it was resolved that Mr. Jaques' report should be accepted by the committee, and then circularized through the entire membership of the committee for suggestions and advice, and for re-submission to the committee meeting at its next session next June. It is hoped that at that time the committee can adopt the code and recommend its approval to the Institute.

Mr. F. J. Hinderliter, chairman of the special committee appointed at the last meeting to consider the question of the adoption of several small sizes of joints, submitted a preliminary report and also placed before the meeting samples of three smaller sizes of joints which his committee felt would cover fully all requirements in smaller sizes. He supplemented this with a blueprint listing the proposed dimensional standards for these three sizes. During the discussion it developed that there was some difference of opinion as to the necessity for these sizes and also that there was some difference of opinion in reference to some of the dimensions. The committee finally decided to refer the data submitted by circular to the entire committee, with the request that both the dimensions and type of joints and also the requirements of these joints be considered by each member of the committee. This data will be further considered at the next meeting of the committee.

A request was made by one of the manufacturers that the sizes of the necks on all rope sockets both for manila and wire rope, be standardized by this committee, in the interests of fishing tool standards. The chairman appointed a special committee consisting of Mr. E. H. Williams, C. T. Mapes and F. J. Hinderliter to investigate and report on this subject at the next meeting.

Since the last regular meeting it has developed there is an existing difference between the outside ring gage on the one and five-eighths-inch by two and five-eighths-inch cable tool joints gages and the Table of Standards as published in Table 1, Page 22 of the A. P. I. Stds. No. 3, Third Edition. It developed in the course of discussion that this would involve a very minor correction to the gages and could easily be taken care of. The committee concluded that this could

A. P. I. Instructions for Attaching Sockets to Wire Rope—Standard Form of Groove

Instructions for Attaching Sockets to Wire Ropes

18-a. The rope shall be securely seized and served with soft wire ties before cutting and at least two additional seizings placed at a distance from the end equal to the length of the basket of the socket. For large ropes the seizing shall be several inches long and securely wrapped with a seizing iron. This is very important, as is prevents the rope untwisting and insures equal tension in the strands when the load is applied. (See Fig. 5 of U. S. Govt. Master Specifications for Wire Rope No. 297, as per Fig. 5.)

18-b. The rope being properly seized shall be inserted through the socket or mandrel then end seizing taken off. Care must be taken that the lay of the line is not allowed to untwist. The hemp center shall be cut back to the seizing and the wire shall be untwisted and broomed out, although they need not necessarily be straightened.

18-c. The wires, for the distance that they are to be inserted in the socket, shall be carefully cleaned with benzine, naphtha, or gasoline, and then the wires dipped for a distance not greater than three-quarters of the cleaned length of the wire in commercial muriatic acid for from 30 seconds to 1 minute, or until the acid has thoroughly cleaned each wire. Care should be taken that the acid does not come into contact with any other portion of the rope. If it does, the wires will become brittle.

18-d. The wires should be dipped in boiling water containing a small amount of soda to neutralize the acid.

18-e. The wires should be inserted into the basket of the socket. Care should be taken that the socket is in line with the axis of the rope.

18-f. The base of the socket should be sealed with putty, clay or any similar subtance. Pour molten zinc into the basket until it is full.

18-g. The zinc must not be too hot or it will anneal the wires, particularly for small ropes. The temperature shall not be above 830 degrees Fahr. When the zinc has solidified sufficiently, the socket may be plunged into cold water. If socketing is properly done, the strands will break near the middle of the specimen, not at the end of the basket. Pine stick test to be made. If it chars but does not ignite, then zinc is ready to pour. If zinc is overheated it has a red color and stick will catch fire.

18-h. Do not use babbitt metal or lead for socketing wire rope. If they are used, the strength of the fastening will be much less than the strength of the rope.

Fig. 5.

PUTTING A SEIZING ON A WIRE ROPE

From U. S. Gov. Master Specification No. 297

(1) Wind the seizing wire on the rope by hand, keeping the coils together and considerable tension on the wire. (2) Twist the ends of the wire together counterclockwise by hand so that the twisted portion of the wires is near the middle of the seizing. (3) Using "Carew" cutters, tighten the twist just enough to take up the slack. Do not try to tighten the seizing by twisting. (4) Tighten the seizing by prying the twist away from the axis of the rope with the cutters. (5) Tighten the twist again as in (3). Repeat (4) and (5) as often as is necessary to make the seizing tight. Cut off the ends of the wires and pound the twist flat against the rope. (6) The appearance of the finished seizing.

Forms of Groove for Wire Rope

B-5. The grooves of drilling and casing line sheaves shall be made for 1" rope as standard. The bottom of the groove shall have 150 degree arc of support with a radius of 17-32" with a sheave manufacturing tolerance of plus 1-64 minus 0. The depth of the groove shall be 1 3-4 times the diameter of the rope. The sides of the groove shall be tangent to the ends of the bottom arc. See Paragraph B-6 for size of rope other than 1". (See Fig. 8.)

(NOTE: *The above is calculated in accordance with the basic formula shown in paragraph*

B-6. The groove for any other size of drilling and casing line is to be specified by the purchaser, the radius of the bottom of the groove to be:

$$R = \frac{D+t}{2} + \text{Sheave Manufacturing Tolerance of } +1/64" - 0"$$

where R = radius of the bottom of the groove, in inches.

D = nominal diameter of line, in inches.

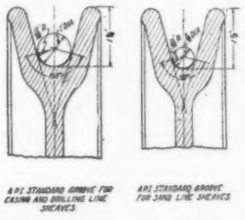
t = specified plus tolerance of line, in inches.

The depth of the groove to be 1 3-4 times the nominal diameter of the rope, and to have a 150 degree arc of support.

B-7. The groove for sand line sheaves shall be made for 5-8" rope as standard. The bottom of the groove shall have a 150 degree arc of support, with a radius of 11-32" with a sheave manufacturing tolerance of plus 1-64" minus 0. The depth of the groove shall be three times the diameter of the rope. The sides of the groove shall be tangent to the ends of the bottom arc. (See Fig. 8.)

(NOTE: *The above is calculated in accordance with the basic formula shown in paragraph B-6, except that the depth of the groove was made three times the diameter of rope.*)

B-8. Sheaves having grooves made according to the foregoing specifications should be marked plainly with the size of line for which the sheave is designed.



API STANDARD GROOVE FOR CASING AND DRILLING LINE SHEAVES

API STANDARD GROOVE FOR SAND LINE SHEAVES

To the above Groove Radius may be added a Manufacturing Tolerance = +1/64" — 0"

Fig. 8.

B-9. It is recommended that the hole in the rope socket and sockets for swivels be 5-32" larger than the line to be inserted.

B-10. Combination sheaves for manila and wire lines are not recommended.

B-11. Grooves on rollers of oil savers should be made to the same tolerances as the grooves on the sheaves.

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be corrected by referring the matter to Mr. Carl Young, who has control of all standard gages.

The chairman submitted to the committee sample posters prepared by the Institute setting forth briefly important items covered by the code of field practice. The general comment of the committee members was favorable to these posters, and this will receive further consideration when the code of this committee is completed and adopted.

There being no further business, on motion duly seconded, the committee adjourned.

Standard Rigs and Derricks

A. M. Bowman, Acting Chairman

The special A. P. I. Committee on the Standardization of Rigs and Derricks, met in room 430A on Monday, December 5, at 10 a.m., being well represented by both the users of derricks and the manufacturers of same.

The first thing on the program was the question of a code to be considered and a number of recommendations were made both verbally and in the form of letters pertaining to this matter. This committee had nine points to consider, six of which were disposed of and three left open for further consideration at some future meeting.

The first thing to be taken up later will be the question of head-boards regarding which Mr. Timbs of the Union Tool Company of Los Angeles, as chairman of the committee, made a report and submitted blue prints which were handed to the different derrick manufacturers that they might take them home and make a study of the dimensions recommended which will probably be accepted or rejected at the next meeting.

The second thing under consideration will be a report from the representatives of the different lumber manufacturing organizations, such as the Southern Pine and the National Lumber Association, these gentlemen having been appointed as a committee to undertake to make a classification or specification for wood which will give the large lumber manufacturers an opportunity to come into the picture with other woods than those which have been used mostly in the past. This report, on account of the magnitude of the work necessary to get it up in a comprehensive manner, will not be ready for some time.

The third report which was not ready was that on the strength and capacity requirements for steel walking beams. The chairman of the Engineering Sub-Committee requested to make this report, stated it would take some time to work this out as it was rather complicated. A detailed report of the meeting held by this committee will be furnished as soon as the minutes are availablie.

Oil Country Tubular Goods

Chas. Fitzgerald, Acting Chairman

Since the last meeting held at Colorado Springs, a considerable number of minor errors in the specifications have been detected and corrected. These changes were approved by the committee.

In STDS. 5-A (casing, drill pipe and tubing), the following changes were made:

References to Drive Pipe have been eliminated since it has developed that practically none of this material is now being used. It was necessary to do this or to add tables on sizes, gauges, etc.

It was called to the attention of the manufacturers that in some instances they have been marking A. P. I. tubing by its outside diameter instead of by its nominal diameter as stated in the specifications.

Three sizes of pipe previously adopted by the Pumping Equipment Committee were approved by the Pipe Committee as follows:

Three and one-half-inch Plain (Not Upset.)

Three and one-half-inch External Upset.

Four-inch External Upset.

The following action was taken in regard to STDS. 5-L (Line pipe):

The question of correlating A. P. I. Gauging Practice with A. E. S. C. Gauging Practice was referred to the special Correlating Committee on Gauging and Gauging Practice, as was also the matter of authorizing the checking of gauges by the National Physical Laboratory at Teddington, England.

The entire tables of test pressure for both 5-A and 5-L specifications have been revised on the basis of one pressure being substituted for the old maximums and minimums. These tables have been further simplified by the consolidation of open hearth steel and grade "A" seamless steel in one table and wrought iron and open hearth iron in one table.

A progress report was received from the special Investigating Committee. Its proposals for a revised statement on the crushing tests was approved. There are several questions of interest in regard to pipe that are to be considered by the A. S. T. Committee, of which Dr. Burgess is chairman. This committee has kindly consented to incorporate our problems in their schedule of tests, and to this end the committee approved the appointment of two members of our special Investigating Committee to become members of Dr. Burgess' committee and to present a list of tests in which we are interested. The remaining items refer-

A. P. I. Recommendations for Care and Use of Oil Field Belting

H-1. Keep belts tightly rolled until ready to apply.

H-2. Always use a square in cutting belts and in laying out bolt holes.

H-3. Use a very small punch or drift pin in making holes in a hair or woven belt. For rubber, solid woven cotton, leather, stitched cotton and balata belts use a punch 1-16" smaller than the bolt.

H-4. Inspect clamp bolts frequently and keep them tight.

H-5. When using belt clamps with filler, replace the filler when it becomes sufficiently worn for the belt to start wearing at the clamps.

H-6. Keep faces of pulleys and band wheels free from dirt and other foreign material.

H-7. Do not allow water, tar, lubricating oil, grease or cement to get on belt or pulleys.

H-8. Do not use melted inner tubes, stick dressing, paraffine or other similar materials for belt dressing.

H-9. If belt dressing recommended by the manufacturer is not available, use only vegetable Castor Oil on belts other than leather, and then only at such time as it becomes absolutely necessary. Use this material very sparingly on hair and fabric belts and only on rubber and balata belts at such time as they have a tendency to slip.

H-10. Use Neatsfoot oil for belt dressing on leather belts and apply it on the outside of the belts.

H-11. Do not run the lap in a leather or step-spliced belt against the pulley.

H-12. Keep the pulleys in alignment.

H-13. Keep all of the belt on the pulleys.

H-14. Do not permit belt to rub on engine sill, sand reel sill, belt house roof, or any other part of the belt house.

H-15. Run the belt as loose as possible without slipping.

H-16. On bandwheel powers release the tension on the belt at the idler when the power is shut down.

H-17. Use properly heat treated steel bolts for clamps.

H-18. Horse power transmitted (See manufacturers tables).

H-19. Store all belts in as cool a place as possible.

H-20. If possible, use belt stretchers in applying the belts to the pulleys. If belt stretchers are not available, use soft rope.

H-21. Keep the belt house as near weather tight as possible and properly drained. It is also recommended that the belt house be floored.

H-22. Keep an accurate belt record.

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red to our special committee have been held over for further consideration.

A tentative draft of the Code on the Care and Use of Pipe has been prepared and will be submitted to a group of users and manufacturers during this meeting, after which it will be put in final form and published, as it is considered important not to hold it over for approval of the entire committee some six months hence.

(Special note: It is expected to issue the specifications on line pipe (A. P. I. Stds. No. 5-L) in the near future.)

Rig Irons

H. J. Lockhart, Chairman

The Rig Iron Committee has but one question to be given consideration at this session of the Institute. It relates to the bases of Jack Post Boxes and reference should be made to Page 23 of A. P. I. Stds. No. 6, Third Edition, September, 1927, copy of which is attached.

At the bottom of the page referred to you will note four dimensions, L, K, J and H, applying to figure 18 near the top of the page. These dimensions were tentatively adopted at the last semi-annual meeting, subject to revision depending on the action of the Standard Rig and Derrick Committee at this convention.

As stated, all other matters regarding specifications have been finally disposed of and, unless there are further suggestions, this committee will be free to give their time to other sub-

A. P. I. Recommended Practices To Be Observed To Obtain Maximum Life From Manila Cordage

Storage of Rope

A-1. (a) Dirty rope should be washed and thoroughly dried before storing. All rope should be thoroughly dry.

(b) All rope should be stored in a dry and well ventilated warehouse. It should be kept as cool as possible but not allowed to freeze. It should not be stored longer than necessary and nevgr longer than one hot season. It may be placed on wooden floors providing same are well ventilated underneath, but it would be better if it were placed on racks. If stored in warehouse with concrete floor the rope should always be placed so that there will be an air space between rope and floor. Under no circumstances should manila cordage and acid be stored in the same building. If covered with galvanized iron, allow ample space above rope and cover for air circulation.

Size of Sheaves

A-2. Sheaves should be as large in diameter as possible. The larger the diameter of the sheaves the longer the rope will last. Data covering sheave sizes can be had from many mechanical engineers' handbooks.

Diameter of Catheads

A-3. It is recommended that the minimum diameter of catheads be 10 inches and that they be made of a wear-resisting material in order that grooving by wear will be minimized. Rope should not be allowed to chafe on cathead when not under load.

Uncoiling Rope

A-4. (a) Place coil flat with "inside" end down and draw end up through center of coil, to avoid kinking.

(b) An ordinary right laid rope should uncoil counter-clockwise; a drilling cable (left laid) should uncoil clockwise.

Protection Against Mechanical Injury

A-5. (a) Avoid dragging rope through dirt and oil, since dirt on the surface of the rope increases wear.

(b) Rope should not be allowed to rub on rough surfaces of beams, blocks, etc.

(c) Kinking should be avoided, since it disturbs the "lay" of the rope and is liable to cut the rope in two.

Field Usage

A-6. (a) It is recommended that old cable be used for "spudding in."

(b) It is recommended that a rope be loaded to not more than 20% of its tensile strength.

(c) Avoid wetting ropes when under load, since wet fibers swell.

(d) The load should be taken off of taut rope when not in service.

(e) A rope should not be subjected to sudden loads.

(f) While drilling, the cable should be loose enough to avoid jerking and tight enough to avoid chafing against the sides of the hole.

(g) Dirt and sand should not be put on bull ropes to increase friction, but twists should be put in, to shorten the lay of the rope.

Standard Size and Forms of Grooves

B-1. No standard shall be approved for a Crown Pulley having a combination groove for both manila and wire lines.

B-2. The groove of the tug rim and bull wheel grooves shall be made for 2½" rope as standard; the undivided angle shall be preferably 60 degrees but in no case greater than 80 degrees; the depth of the groove shall be not less than 2⅛" nor more than 2⅝"; the bottom of the groove shall be made with a ½" radius with a tolerance of minus 0, plus ⅛"; the edges of the groove, or tops of the groove, shall be rounded with not less than ½" radius.

B-3. The standard groove for manila drilling cable shall be made for the 2¼" cable. The bottom of the groove shall be an arc with a radius of 1⅜". The sides of the groove shall be tangent to the ends of this arc, and shall have an included angle of 30 degrees. The depth of the groove shall be 2½". (See Fig. 1).

(This form of groove calculated in accordance with basic formula given in paragraph B-5.)

B-4. The groove in the derrick line sheave shall be made for 1¼" manila rope. The bottom of the groove shall be an arc with a radius of ¾". The sides of the groove shall be tangent to the ends of this arc, and shall have an included angle of 30 degrees. The depth of the groove shall be 1½". (See Fig. 1).

(NOTE: *The above is calculated in accordance with the basic formula in paragraph B-5.*)

B-5. For sheaves for any other size manila drill lines, and other manila lines, the bottom of the groove shall be an arc having a radius equal to

$$R=(D+t)/2+\tfrac{1}{16}"$$

where R=radius of bottom of groove, inches
D=nominal diameter of line, inches
t=specified tolerance in line diameter, inches

The depth of the groove shall be 1⅛ times the nominal diameter of the line.

The sides of the groove shall be tangent to the ends of the arc forming the bottom of the groove and shall have an included angle of 30 degrees.

N. B.: *The radius "R" should be expressed in values not less than sixteenths of an inch. Should the solution of the above equation result in a fractional part of an inch smaller than 1/16", the value found should be increased to the next higher sixteenth.*

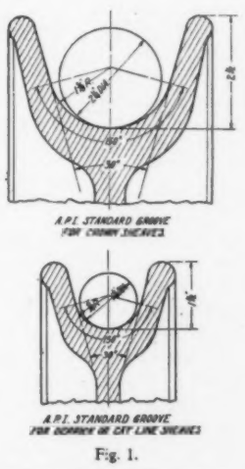

Fig. 1.

For further information apply to
A.P.I. DIVISION OF STANDARDIZATION
1508 Kirby Bldg., Dallas, Texas

Reproduction of the sample poster prepared by the Division of Standardization on Practices To Be Observed To Obtain Maximum Life From Manila Cordage.

jects such as discussion of methods to disseminate information on use of A. P. I. Standards and Codes of Field Practice.

Rotary Drilling Equipment

E. J. Nicklos, Acting Chairman

The Committee on Rotary Drilling Equipment at the eighth annual convention of the American Petroleum Institute, met in Room 445-A, on Monday afternoon, December 5, Mr. E. J. Nicklos presiding, and have the following report of their work:

Specifications for swivel gooseneck hose connections as furnished by the engineering committee were approved.

Tentative specifications for line shafts in the six and one-half and seven-inch sizes, as furnished by the engineering committee were approved.

The request for change in standoff valve on rotary drill pipe was discussed at length and it was recommended no change be made in the present specifications.

Changes in depth of recess in pipe end of rotary tool joints were approved.

After investigation by the manufacturers and the engineering sub-committee into the question of A. P. I. standard sprocket tooth form, which have proven unsatisfactory, this committee has voted that this specification be stricken off the records as an A. P. I. standard.

The attention of this committee was called to numerous widths of flanges in I-beam sections for chrome block. This matter was referred to the engineering committee.

We received a communication requesting special dimensions on line shafts to fit a special automatic cathead. It was voted to disregard this question of special line shafts.

The use of special posters to be distributed throughout the oil fields was unanimously approved.

This committee requests an appropriation of $765.88 to take care of the unabsorbed difference in the left-hand tapered joint gages.

The committee adjourned Wednesday morning at 11 o'clock.

Wire Rope and Manila Cordage

C. C. Scharpenberg, Chairman Wire Rope Section

A well attended meeting was had, 30 representatives present.

Reports were had from all district committees except the Rocky Mountain Committee.

Data submitted showed that of lines tested, many passed the present specifications. Nevertheless, many lines are reported to have failed by the adoption of these specifications as final instead of tentative, it is felt that the percentage of passing lines will be materially increased and the percentage of lines failing to pass will be materially decreased. Reports were had regarding the successful use of a 25-inch by 34-inch grooved rotary drum showing that the line spooled properly at all times and that service of line had been increased. This report showed that the wire lines are properly supported, evenly wound, resulting in less distortion and increased life, together with a saving of approximately $50 worth of line each time a new line is put on drum.

Report of Rotary Wire Line Duty meter as worked out by the General Petroleum Corporation and the Union Oil Company of California.

This meter is now in successful operation and will furnish data so that the service rendered can be expressed in ton mile basis and stress and speeds at all times be known.

Report from the Engineering and Research Committee regarding the button test as proposed at a previous meeting. This committee was not able to set the necessary limits and tolerances for applying and interpreting the results.

Mr. H. C. O. Clark, reporting through Mr. H. J. Lowe, regarding tentative specifications for well measuring tapes; these will be acted on at a later meeting.

It was not felt that definite standardized specifications could be written on Torpedo, power pull, pumping and swabbing lines at the present time due to the lack of standard methods of usage in the different fields.

Several minor changes were adopted to clarify the present specifications.

The Rope Manufacturers Committee submitted a brief with respect to the practice of clamp slippage and resultant damage to drilling lines used for deep hole drilling and strongly urged that some improved method be adopted for feeding drill line into the hole without forcing the drillers to recourse to the slippage of rope through the clamps as the present available means for speeding up drilling operations.

It is recommended that the present specifications be adopted as final. Four committees reporting favorable and one committee withholding their approval pending the completion of test now in progress.

The adoption of these specifications as final will have decided effect in making these specifications obligatory and definite, instead of being uncertain and passive also will leave a beneficial effect on any ropes slipped into consigned stocks in the oil fields.

The posters as prepared were fully approved and commended in the furtherance of the objects sought by this committee.

Manila Cordage Section

Due to the few representatives present, only an informal session was held.

These specifications will remain tentative until next meeting.

Pumping Equipment and Engines

T. E. Swigart, Chairman

The committee has taken the following action at the present meeting:

1. Adopted tentative specifications for motor frame dimensions. These will be acted upon finally at the 1928 Colorado Springs meeting. Also has appointed a representative to seek cooperation with National Electrical Manufacturers Association on this subject.

2. Standardized countershafts for belted pumping units.

3. Standardized certain dimensions on reduction gear pumping units.

4. Standardized dimensions and threads in exhaust manifold openings for internal combustion engines for oil field service.

5. Adopted standard rating test form for multi-cylinder internal combustion engines for oil field service.

6. Reviewed tentative A. P. I. Standards No. 11-D on pump parts and adopted this as final specifications with slight modifications. Also formulated method of designating fits of plunger pumps for machined working barrels.

7. Standardized forms and dimensions of pull-rod ends and couplings.

8. Appointed committee to compile rating test form for electric motors for oil field service.

All details of committee's work will be given in chairman's final report.

Steel Tanks for Oil Storage

Ralph J. Reed, Chairman

The special Committee on the Standardization of steel tanks for oil storage at its meeting of Monday, December 5, approved, with a few minor revisions, the General Specifications for Steel Storage Tanks issued in mimeograph form as A. P. I. Standards No. 12, July, 1927. It also adopted, subject to final engineering check, the details of design for the tanks whose dimensions and capacities are tabulated in these specifications. It now recommends that the specifications be approved by the general committee and submitted to the Board of Directors for final approval. They should then be printed for inclusion in the handbook of standards.

The detailed drawings for the tanks tabulated in the specifications must now be prepared, and the committee requests the General Standards Committee to appropriate $2500 to carry out this work.

The special committee requests the general committee to recommend to the Board of Directors that it authorize the use of the A. P. I. monogram on tanks with riveted shells built in strict compliance with the A. P. I. General Specifications for Steel Storage Tanks and the drawings which will accompany them. At its meeting, the special committee authorized the appointment, by its chairman, of a subcommittee to make recommendations concerning the welded tank bottoms; it proposed to proceed with a study of tank accessories and hopes to be able

(Continued on page 44)

EDITORIAL COMMENT

Looking Forward

By R. L. DUDLEY

WITH fuel oil a problem that will be with the oil industry as long as it is an industry, it is gratifying to know that the oil business is now looking to additional markets for its products, and that fuel oil has had the consideration it deserves, in at least one oil man's thoughts.

Right now the oil business faces a peculiar problem. Undoubtedly "over-production" will continue through 1928. If less oil is run to cracking stills, and more straight run gasoline is produced, then "over-production" of crude will not be an extremely serious problem. But if less oil is run to cracking stills, and more straight run gasoline is made, it is obvious that we shall have an "over-production" of fuel oil.

How long such a condition will last no one knows. One proponent of the "things-will-work-themselves-out-right" theory, feels that if the "worst comes" and in the dim distant future there is a shortage of fuel oil, the scarcity of the supply will stimulate the price to the point where fuel oil will play a real part in the value of a barrel of crude.

However, it is not unreasonable to assume that if fuel oil should, in the dim distant future, go to much higher levels in price, the principal users of fuel oil, steamships especially, will find it too expensive, with the result that established markets will fade.

Of course that is speculating into the future, but a little speculation of that type will not injure the oil industry.

It would appear, on the face of things, in view of the production situation at home and abroad, that we will have plenty of fuel oil for a long time to come.

Why not, then, develop a latent market that lies at our very doors—in fact, it lies within the doors of many in the oil business—the domestic heating business.

In a paper presented at the A. P. I. meeting in Chicago, Harry G. Freuhauff, of Henry L. Doherty & Company, made some very interesting observations and suggestions. His address in Chicago deserves more than simply being recorded. His suggestions deserve more than simply comment. They deserve action.

And, no doubt, they will be given action.

After all, is there any more reason why oil burning equipment for the home shouldn't be sold by the oil companies, and serviced by the oil companies, just as gas burning equipment is being sold and serviced, for a price, by the gas utilities companies.

The only objection that has been raised is that "there is no suitable burner on the market," a statement which is being contradicted by many satisfied users of home oil burning equipment every day.

This is a prophesy—

Oil burning equipment will be sold on the installment plan by oil companies, and serviced, for a charge by oil companies who will be making year contracts for delivery at a profitable price, and that on a large scale, within five years, and when that time comes the oil industry will have taken a big step forward in solving one of its own most perplexing problems.

We were talking the other day with an oil man who has been a consistent student of the oil situation, and who has taken the trouble to keep posted on foreign oil affairs as well as domestic.

He said that the American oil man is facing the possibility of a much greater foreign competition that he thinks, and to support his view, pointed out the situation in Persia where enormous reserves have been uncovered; the possibility of big production in Mesopotamia where the Turkish Petroleum Company is reported to have completed a 25,000 barrel well recently, and also the probability of much greater production from well established pools in Europe and Asia.

Persia alone, he said, could wreck the market, if the reports he has been reading are to be credited. He spoke of one well which has within a comparatively short number of years produced more oil than many well known pools in the Mid-Continent have in their entirety.

And then one Texas operator 15 minutes later asserted the belief that West Texas could be producing a million barrels a day within 60 days, if it were necessary.

Which makes us feel thankful that the Anglo-Persian Company has not had town-lot drilling in Persia, and that pro-ration seems to be working fairly well in the Lone Star State.

The Oil and Gas Mining Lease suggested to the American Petroleum Institute by its legal sub-committee of the Marland Committee would be an ideal lease for the operator, but we would be very much interested in being present when it is presented to a land owner.

Many of its provisions would materially help the industry, but of what use is a lease unless a land owner is willing to sign it? If suggestions are in order, we would suggest that its practicability could be materially improved in several places.

We fear that if an attempt is made to use it in full as presented, much of the good in it would be lost because of some clauses, which, no matter how well founded the good faith of the oil company might be, would be looked upon with suspicion by the lessor.

November Production Declines; More Completions

Oklahoma and California have decrease in output while Texas shows increase; proration agreements affecting production

By A. R. McTEE
Staff Representative

NOTWITHSTANDING a considerable increase in field work for November, the daily average production of crude declined sufficiently to cause a drop in the net output, as compared with October. The total yield for last month was 74,233,500 barrels, or a daily production amounting to 2,474,450 barrels. This represents a loss of 16,850 barrels daily, and a total decrease of 2,996,800 barrels, as against the previous month.

Drilling statistics gave a gain in completions amounting to 111, over October, with a total of 1,651 wells completed. There was a slight gain in producers and failures, with more than 40,000 barrels increased initial output, but gas wells declined slightly.

The most noticeable gain in drilling was in Texas and Oklahoma, but Kansas, Louisiana, Kentucky, Indiana, Michigan and Tennessee also showed more completions than in October.

Decline in daily average persisted in most States, Texas, Kansas, Eastern States and the Rocky Mountain district being the exceptions.

Oklahoma output was off 15,400 barrels daily, and California dropped from 629,000 to 623,850 barrels. On the other hand, Texas, outside the Gulf Coast, increased from 497,900 barrels to 501,750 barrels.

Inasmuch as production figures are being held down by means of pro-ration agreements, it is doubtful if the situation in general is improved by the drop in output. The Yates field in Pecos County, Texas, has shown itself to have a higher daily average yield than most operators had believed possible. Since the field has limited pipe line facilities, however, and due to the objectionable sulphur content of the crude, there is little danger of wells being flowed at anything like their capacity. Water encroachment has also given cause for worry, and is forcing operators on the east side of the field especially, to hold back their wells as much as possible.

Seminole gives little indication of rapid declines, though the trend of the entire district is now downward.

Most of the increased drilling in Texas and Oklahoma can be accounted for in a few fields: Winkler County and Pecos, for instance, in Texas, and Seminole in Oklahoma.

Mid-Continent refiners are running more oil now than they were two months ago, taking as much production as possible off the producer's hands.

U. S. PRODUCTION

The following is the gross estimated production of crude oil in the United States for November, as compiled by the American Petroleum Institute. These figures do not agree exactly with figures compiled from individual field production as shown elsewhere in this issue, due to the fact that the figures below are final, whereas the others are unrevised estimates:

Field—	Daily Average	Monthly Total
Oklahoma	766,900	23,007,000
Kansas	106,650	3,199,500
Texas (Outside Gulf Coast)	501,750	15,052,500
Gulf Coast	138,100	4,143,000
North Louisiana	49,400	1,482,000
Arkansas	97,850	2,935,500
Eastern States	114,900	3,447,000
Rocky Mountains	75,050	2,251,500
California	623,850	18,715,500
Totals	2,474,450	74,233,500

Throughout the month, Winkler County in West Texas was the only district where crude was available in appreciable amounts below the posted price.

Heavy storage building programs are so expensive in the West Texas area that a good many operators cannot afford them, and a few prefer to get rid of their production at a sacrifice, if necessary.

West Texas

The volume of shut-in production in West Texas was materially increased during November by a big quota of new wells from the Yates and Hendricks fields and an average run of completions from the older fields. New field work in the latter two flush areas is being pushed forward at top speed, although actual production in the Yates field is being restricted to current pipe line outlet, or about 10 per cent of the estimated potential daily production of the field.

The Hendricks field registered its best completion in November when Roxana Petroleum Corporation's Hendricks 1-C gauged 980 barrels of 29 plus gravity oil during the first hour gauge after drilling to 2,885 feet, and being allowed to flow in to field storage at a rate of 6,000 barrels daily. No effort is being made to restrict the production in this field to actual pipe line outlet, which is limited to those terminating at tank car racks, and many producers are building large tank farms to proceed with their development program.

Field work has subsided in the Church and Fields, Gulf-McElroy and McCamey areas because of a limit having been reached on pipe line outlet, and also because of the strained condition of the West Texas crude market. The Howard County area is undergoing a normal development program, with renewed interest being taken in the 2,990-foot lime pay, which was uncovered late in October by Magnolia Petroleum Company. This deep producer remained partially shut in for pipe line connections without obtaining an open flow gauge until late in November, and then gauged 2,850 barrels natural.

Texas Panhandle

Flush production and unusually high gravity oil furnished by the Bowers and Jackson leases on the lower end of the Pampa field, located in Gray County, Texas Panhandle, has turned this area into the most active spot in the district. The oil tests about 44 gravity (corrected), and is almost entirely free from sulphur, thus putting it on a par in quality with regular Mid-Continent oils, but at a much cheaper price. About 20 tests are drilling in this area, and production is expected to jump to above 20,000 barrels daily within six weeks. A ready market is available for all oil produced, with major purchasers and independent crude buyers competing for the oil.

Other sections of the Texas Panhandle continue subnormal on field work, and production is declining in all counties, excepting Gray. The increased market outlet for natural gas production has helped to keep up drilling in Carson, Hutchinson and Wheeler Counties lately.

The reinstatement of drilling obligations assumed by operators in purchasing leases on the W. T. Waggoner lands in Wilbarger County was made in November after being lifted since early last summer by R. L. More, who has charge of the Waggoner Estate. This action has caused the starting of a number of new tests, otherwise a certain amount of acreage would be forfeited by the operators for failure to carry out lease contract. A few minor extensions were given old producing areas in Archer County during the month, but the depressed condition of the market in general has had a tendency to hold new field work to a minimum, such being also true in Wichita, Young, Cooke and Montague Counties. Shallow production in western Jack County has led to an increase in completions from this county lately.

In the Central West Texas district, a noticeable slump in field work has been registered. Brown County activity decreased as a result of the Fry district having been practically defined and drilled up. The prevailing price of crude does not offer encouragement in drilling for the deep lime pay in Eastland, Shackelford and Stephens Counties, and a very

limited amount of drilling is taking place.

The Mexia-Corsicana district in East Central Texas is virtually at a standstill, and no new fields have been discovered since the bringing in of the Cedar Creek field last summer.

Gulf Coast

In Texas and Louisiana gulf coast territory, activity held to about normal, with more than usual interest centered in Cameron Parish, Louisiana. In this parish, on the Kelso Bayou dome, Calcasieu Oil Company is doing considerable testing and has had encouraging results so far. One well has been completed for better than 1,000 barrels of pipe line oil, and others are drilling.

A third deep pay sand in the Pierce Junction field, Harris County, on the Texas side, was discovered by the Navarro Oil Company in its Cain 3, which made 2,500 barrels of pipe line oil from 5,260 feet.

The North Dayton field was extended approximately one-quarter of a mile toward the southeast with a small well.

Production of the entire coastal district showed very little change over October.

North Louisiana and Arkansas

Interest in the new Champanolle field, Union County, Arkansas, was maintained during November with the completion of the fourth commercial producer. The field is 12 miles northeast of El Dorado and five miles northeast of the El Dorado East field. The well caused a flurry in drilling activity and locations were made for about eight additional tests.

Interest in the Pine Island deep production section was revived by the belief that wells there were drawing oil from crevices thought to be above the regular Trinity formation, and several permits for new wells were taken out late in the month.

Louisiana showed an increase in drilling, but many of the completions reported were wildcat failures.

California

The inauguration of an almost unprecedented deepening campaign in the Long Beach field, the rapid decline of the Seal Beach area and the discovery of the Rincon field in Ventura County were the most important developments during November in California oil circles. Just as production has promised to slump appreciably, at least two critical areas have made their appearance.

The Long Beach field, which turned the whole petroleum world completely around several years ago, is bidding for honors again. The present deepening campaign, which was the outgrowth of a few large wells completed around 6,000 feet, has grown until more than 100 wells are headed for the lower levels. Many of the old wells are being deepened, but a vastly greater number are starting from the surface. When the wells were originally completed, there was little reason to believe that they would need to be taken deeper. For that reason, the oil string was usually too small to justify running still another string to the 6,000-foot level.

The extent of the deep zone has proven to be much larger than originally thought. Large wells have been completed in various parts of the field, indicating that the deeper sand may lie in an almost unbroken blanket across the center of the field. Prolific wells have cropped out in spots which did not produce any too satisfactorily in the upper sand. Development is not far enough along to predict the maximum producing limits of the deep zone, but it is sure to extend over a large area.

The Seal Beach field temporarily passed the critical stage during the month. Only the discovery of a still deeper sand, or the development of the main field by the Standard, Associated and Marlin will keep production at its present level of 50,000 barrels. The Alamitos Heights area finally yielded to the forces which always undermine townlot drilling, and was passed by the main part of the field. The cluster of wells played havoc while they were in their zenith, but the gas pressure failed and production tumbled several thousand barrels weekly. An effort has been made to develop another sand below the Wasem, but apparently the possibilities are very limited. The Superior Oil Company did find a small quantity of oil around 6,000 feet, but a puzzling water situation has not been solved. Compressors of all sorts have been rushed to the field to bolster the waning production.

While the status of the Pan-American Petroleum Company's discovery well in the new Rincon field is far from satisfactory, a new field has unmistakably been added to the many already found this year in the State. The well came in prematurely and flowed at the rate of more than 1,000 barrels for some time. The oil was almost clean and came from only four feet of sand, unless the bridge below the show was allowing additional crude to pass. The well was cleaned out from 2,782 feet to the bottom at 3,220 feet, and allowed to flow for several days. The first fluid was about 90 per cent water, but later tested 60 per cent water and 40 per cent 29.2 gravity oil. At the end of the third day, it was evident that the sand contained water and the well could not be expected to produce clean oil in such a state. The well was killed and water was found to be coming into the hole in three places. The company is attempting to solve the water problem.

After several years of effort, commercial production has been developed in the Devils Den area. The Midway Northern Oil Company completed a small black oil producer in that isolated field. The structure is located about 70 miles north of Taft and 30 miles from the nearest telephone. Developments will be slow in the area.

The Potrero field still remains a questionable factor. The Associated Oil Company has deepened the discovery well to 5,215 feet, but has made no further tests. A good oil sand was cut between 5,150 and 5,185 feet, but its possibilities are not known.

The General Petroleum Corporation encountered a good oil sand around 4,000 feet in its Kerwin well.

Oklahoma and Kansas

Toward the close of the month, well shooting at Earlsboro and Bowlegs, in the Seminole area, boosted the output of the district to more than 430,000 barrels, giving indications of what can be expected from attempts to bring back old wells.

At the end of the month, storage capacity at Seminole was 21,894,000 barrels, with stocks amounting to 16,266,459 barrels, leaving 5,266,459 barrels space. An estimated capacity totaling 4,505,500 barrels was under construction at the first of December, much of which was to be completed soon.

Kansas field activity showed a gain during the month and was advancing on December 1, due to exploration work and development around the Lamong and Oxford.

Total production peak of the Oxford pool at the end of November was 5,255 barrels from 12 wells.

The Lamont area in northeastern Greenwood County, a second producer was completed late in the month, offsetting the discovery test.

Mountain States barely held their own in field work, but gained slightly in daily average output, due to increases from the Kevin-Sunburst, Montana field. Of the 21 wells completed in Wyoming, Montana and Colorado, 12 were in the Kevin-Sunburst district. Total initial production from the group of states was 15,849 barrels.

Eastern States gained 1,300 barrels in daily average, but declined in completions. Drilling throughout this section was routine and no important extensions were reported from any of the fields.

PAST TWELVE MONTHS

The record for the past twelve months is an interesting study for comparison purposes, the following table giving field statistics for all states in the Union.

Month—	Completions	Producers	Gas Wells	Failures	Initial Prod.
November, 1926	2,405	1,473	279	653	430,847
December	2,754	1,774	301	679	469,242
January, 1927	1,989	1,257	192	540	315,948
February	1,965	1,215	225	525	284,016
March	1,881	1,190	175	516	321,119
May	1,777	1,060	166	551	400,022
June	1,726	1,049	178	499	359,380
July	2,036	1,219	238	579	486,489
August	1,642	982	207	453	439,735
September	1,870	1,092	228	551	380,851
October	1,541	870	225	446	322,603
November	1,651	901	205	545	367,657

UNITED STATES FIELD STATISTICS

Following are the completions showing producers, gas wells, failures, and initial production of crude by states, for the four weeks ending November 26, as compiled by The Oil Weekly:

Arkansas	21	9	2	10	803
California	66	48	..	18	30,755
Illinois	14	5	..	9	118
Indiana	20	10	2	8	349
Kansas	111	53	9	49	13,425
Kentucky	105	59	4	42	2,555
Louisiana	85	34	15	36	10,592
Michigan	33	18	..	15	230
Mountain States	21	17	3	1	15,849
New York	30	27	2	1	101
Ohio	107	47	39	21	1,205
Oklahoma	440	237	51	152	125,436
Pennsylvania	120	101	15	4	360
Tennessee	12	10	1	1	740
Texas	407	213	29	165	165,048
West Virginia	59	13	33	13	91
Totals	1,651	901	205	545	367,657
Last Month	1,541	870	225	446	322,603

Institute Seeks Laws to Permit Unit Operation

(Continued from page 28)

dently, or as a committee by the appropriate Institute division to continue the study of the subject of gas conservation, the efficient utilization of gas and the general technique of production; and that a legal committee, composed of the present members of this committee's legal sub-committee, with the addition of a member from the Rocky Mountain, California, Texas and Louisiana-Arkansas districts, be continued to advise the technical committee and to also report to the Board of Directors of the Institute a recommended standard American Petroleum Institute Lease Form; and that the board make available the necessary funds for the conduct of activity by these two committees, and the findings of these committees be made available to the industry from time to time.

"Your committee submits the foregoing as its report and asks that the committee be discharged."

The report was signed by E. W. Marland, chairman; W. S. Farish, S. H. Keoughan, J. Edgar Pew, L. P. St. Clair.

An exception to the report was filed by Thomas A. O'Donnell, who said, "I agree with the foregoing report, except that part recommending state legislation, which I would limit to the proposition that the gas should all be shut off and not allowed to escape in the air; and that rules and regulations in detail as to how to operate the wells thereafter be left to the petroleum industry itself."

A minority report was also filed by Henry McGraw, a member of the committee, in the form of a letter to the Executive Committee of the Board of Directors of the American Petroleum Institute, in which he said in part:

"The problems facing the committee were, in their major aspects, the same problems that confronted the Committee of Eleven appointed by the American Petroleum Institute in the year 1925 to investigate the problem of conservation and to report its conclusions to the Institute. This Committee of Eleven, after a thorough investigation, made report to the Institute in the fall of 1925. The gist of said report is found in the 'summary of conclusions' signed by the full committee and reproduced in a lengthy dissertation on American Petroleum-Supply and Demand, which is published in book form and was submitted to the Federal Oil Conservation Board appointed by the President of the United States. This summary of conclusions is short and is, I feel, consistent with the facts as they were found to exist, and as I see the situation, furnishes an unanswerable argument against the legislation proposed by the report prepared by the Committee of Seven on January 6, 1927. The 'summary of conclusions' as published is attached hereto.

"It is likewise pertinent to call attention to the fact that at the public hearing held May 27, 1926, before the Federal Oil Conservation Board at Washington, the Honorable Charles Evans Hughes, counsel for the American Petroleum Institute, with the report of the Committee of Eleven fresh in mind, presented in his forceful way the substantial objections to such legislation as is proposed by the report of the Committee of Seven. Several of the members of the Committee of Seven were present at this hearing, and so far as I am advised, they did not then voice any objections to the argument made by Justice Hughes.

"The conclusions reached by the Committee of Eleven in 1925 and the position taken by the eminent counsel for the Federal Oil Conservation Board in 1926, were in my judgment sound at that time, and nothing has happened since then to cause me to change my views in the premises."

In submitting its report for the action of the board, the Marland Committee also submitted a new form of oil and gas lease which was drawn by its legal sub-committee and which, it is believed by the committee, will meet the contingencies arising from the unit plan of operation.

This suggested type of lease form is published in detail in this issue of THE OIL WEEKLY.

Technical Report Shows Need of Conserving Gas

(*Continued from page* 30)

sand. This is done by regulating the flow stream from the well in such a way as to regulate the fluid pressure on the exposed face of the reservoir in the well.

The methods which have been found effective in various fields are the tubing of wells, as early in their life as conditions allow, instead of permitting them to flow through the casing; the use of flow beans; the regulation of lengths and sizes of flow lines; the regulation of trap pressures; stop-cocking, or alternately closing and opening a well to maintain an intermittent flow; and the use of the air gas lift, which alters the fluid pressure on the face of the reservoir formation and simultaneously alters the fluidity, specific gravity, and energy in the fluid column in the well so that more efficient flow may be maintained. Each of these methods has been found valuable in various places and under various conditions, but no one of them is valuable under all conditions. As has already been emphasized, each fluid, each lease, and each well must be given individual study.

Wells which have too high a gas-oil ratio and refuse to respond to treatment should, whenever possible, be shut in to conserve the gas pressure. In certain cases this has been found to increase the production of nearby wells by more than the amount of the former production of the shut-in wells, and the ultimate yield of the area should be considerably benefited. This is also, of course, a practice to be adopted only under unit of co-operative operation of the field.

In this class fall fields which have an area of free gas on top the structure. The dissipation of this free gas not only deprives the field of a great energy value available to produce the oil but draws the oil into the free gas area and disseminates it through previously dry sand from which much of it may never be recovered. The shutting in of the gas wells confines the oil to its original boundaries, permits the utilization of the energy and solution values of the gas, and defers the day of water encroachment.

The general effects of injecting natural gas, air, or flue gas into a wholly or partially depleted reservoir have already been discussed. The three methods generally considered are pressure maintenance, repressuring, and gas drive. In practice the three are not always distinguishable.

In repressuring gas is introduced into the sane under pressure through certain wells while all other wells are shut in.

The method has certain theoretical advantages and certain economic disadvantages, and has not been adequately tested.

In pressure maintenance and the gas drive gas—natural gas, air, or flue gas—is introduced into the sand through "key" or "input" wells, and oil and gas are produced from surrounding wells. The injection of gas should be started as early in the life of the field as production conditions will permit, and the gas injection and the maintenance of back pressure on the other wells should be so regulated as to maintain the original gas pressure as nearly as possible.

In certain Texas and Louisiana fields gas drive is estimated to have increased the ultimate recovery 35 to 60 per cent, with decided increases in current production.

Most of the methods discussed above cannot be effectively applied in fields in which the leases are in diverse ownership and competitive operating conditions prevail. The effectiveness of most of them depends on simultaneous application to the whole of a productive area. Proper well spacing, proper well timing, pressure control, pressure restoration, gas drive—only in rare cases can these methods be adopted by the competitive operator in a field. Unless a field is operated as a unit, whether by co-operation or control, there is little chance of holding down the gas-oil ratio, utilizing the energy and solution values of the gas, making the gas do the maximum work in the production of oil, or producing the greatest total amount of oil at the smallest cost.

The report was signed by Earl Oliver, chairman, and G. C. Gester, for Pacific Coast; W. P. Haseman, Kansas-Oklahoma; Fred E. Wood, Rocky Mountain Region; John R. Suman, Texas and Louisiana; Max W. Ball, secretary.

Proposed Lease Form Submitted By Committee

CHICAGO.—A new form of oil and gas lease to cover the question of unit operation and to care for certain other reforms in the present oil and gas lease form was submitted by the legal sub-committee of the Marland Committee at the meeting here last week as a part of the committee's report to the board of directors.

The new form takes into consideration the possibility of unit operation in Paragraph 10 where it is agreed that the lessee may at any time pool its interest with other leases situated on the same geological structure for the purpose of the development and operation of all such leases as a unit.

The legal sub-committee is composed of James A. Veasey, Rush Greenslade and D. A. Richardson.

The new form in detail follows:

OIL AND GAS MINING LEASE

LEASE made this.....day of....., ..., between ....., Lessor, and .....,

Lessee, WITNESSETH:

1. Lessor, in consideration of..... Dollars and the covenants of Lessee hereinafter appearing, hereby grants and leases to Lessee the exclusive right to mine and operate for oil and gas purposes the following described land situated in.....County, State of ....., to-wit:

.....

.....

.....

Section....., Township....., Range....., containing.....acres, more or less.

2. This lease shall remain in force for ten years from date hereof and as long thereafter as oil and gas, or either of them, is or can be produced.

3. Lessee shall deliver, as royalty, to Lessor's credit in the pipe line to which Lessee's wells are connected the equal one-eighth part of all oil produced and saved from the leased premises, or Lessee, at its selection, may pay such royalty in cash at the market price at the well for oil of like grade and quality prevailing on the day such oil is run into the pipe line or Lessee may run such oil into storage and pay such price.

4. Lessee shall pay Lessor as royalty, monthly, one-eighth of the proceeds of all gas sold from the leased land. Where the production of wells producing gas only is not sold, Lessee shall pay Lessor, as royalty, Fifty Dollars ($50.00) per well per annum and such wells shall be deemed producing wells under Paragraph No. 2 hereof. Where Lessee uses gas from oil wells in the manufacture of gasoline or any other product, or uses such gas off the premises, Lessee shall pay Lessor, as royalty, the market value at the well of one-eighth of the gas so used. Lessee, without the payment of royalty, may use oil, gas or water found on said land for its operation thereon except water from Lessor's wells. Lessor, by making his own connections and at his sole risk and expense, may take sufficient gas from Lessee's gas wells, free of charge, for stoves and inside lights in the principal dwelling house on said land.

5. If operations for the drilling of a well for oil or gas are not commenced on said land on or before one year from this date, this lease shall terminate unless the Lessee shall on or before said date pay or tender to the Lessor or for the Lessor's credit in the..... Bank of ....., or its successors, which bank and its successors are the Lessor's agent and shall continue as the depositary of any and all sums payable under this lease regardless of changes of ownership in the land or in the oil and gas or in the payments accruing hereunder, the sum of..... Dollars ($.....) which shall operate as a rental and cover the privilege of deferring the commencement of drilling operations for one year. In like manner and upon like payments or tenders the commencement of drilling operations may be further deferred for like periods successively. All payments or tenders of rentals or royalties may be made by check or draft of Lessee or any assignee mailed or delivered on or before the due date thereof. In event such bank shall cease to exist and has no successor, then all payments hereunder may be made as herein provided by Lessee or assignee to any National Bank located in..... ....., with the same force and effect as if made to the above named bank. If at any time there shall be more than four persons entitled to participate in the rentals or royalties accruing hereunder, then Lessee may pay such rentals or royalties to the depositary bank herein provided for, to be by such bank deposited to the credit of the lease, and such payment shall be as binding and effective as if made to the owners of such interest in person. No change in the ownership of said land, oil and gas thereunder, rentals or royalties, or any part thereof shall effect the rights or obligations of Lessee unless and until notice thereof in writing accompanied by the original instrument of transfer or a duly certified copy thereof shall have been served on the Lessee.

6. If at any time during the fixed term of this lease Lessee shall drill a dry hole or for any cause the production on the leased premises shall cease, this lease shall not terminate if, on or before the next ensuing rental date, lessee shall commence operations for the drilling of another well or begin to resume payment of rentals as above provided. If after the expiration of the fixed term of this lease production on the leased premises shall cease from any cause, this lease shall not terminate provided lessee resumes operations for drilling a well within sixty days from such cessation and this lease shall remain in force during the prosecution of such operations and, if production results therefrom, then as long as production continues. Notwithstanding any provision of this lease to the contrary, if Lessee, during the life of this lease, shall commence drilling operations this lease shall remain in force as long as operations are prosecuted and, if production results therefrom, then so long as production continues.

7. Lessee shall offset any well producing oil or gas in paying quantities upon adjoining land within 330 feet of the outer lines of the leased land, but this lease shall not be forfeited or cancelled for failure to drill any such offset well unless and until a written notice to drill such has been served upon it, and unless and until it shall have first been finally judicially determined that it was the duty of Lessee to drill such offset well and, in such event, Lessee shall have thirty days from date of the decrees in which to commence driling operations, and if such operations are commenced no final decree of forfeiture or cancellation shall be entered, and in no event shall such decree be entered before the expiration of the thirty day period. When required by Lessor, Lessee shall bury pipe lines below plow depth and pay for damage caused by its operations to growing crops. No well shall be drilled nearer than 200 feet to the house or barn now on said land without Lessor's written consent. Lessee shall have the right, at any time during or after the expiration of this lease, to remove its property of whatever description placed on said land, including the right to draw and remove all casing whether from producing or non-producing wells.

8. If Lessor shall sell or transfer in separate parcels any of the leased premises or any interest in the oil and/or gas under a particular part thereof, such action shall not add to Lessee's drilling obligations. Lessee's right to operate the leased premises as an entirety shall not be impaired by any transfer or conveyance, and each owner of a separate tract or tracts or of the oil and/or gas thereunder shall receive such proportion of the rentals and royalties accruing hereunder as the acreage owned by him bears to the entire acreage. Lessee may assign this lease in whole or in part, and, if assigned in whole, its obligations hereunder shall cease; if assigned in part, then its obligations as to such assigned part or parts shall cease. In event Lessee shall assign any part or parts, assignee shall pay the rentals and royalties accruing hereunder upon or from the acreage held by him, and Lessee shall pay the rentals and royalties accruing upon or from the acreage retained by it. Default in any payment due hereunder or default as to any drilling obligation by Lessee, or any assignee, shall not affect the rights of interests of any such one not in such default.

9. Lessor hereby warrants and agrees to defend the title to the land and agrees that the Lessee, at its option, may pay and discharge any taxes, mortgages, or other liens existing, levied or assessed on or against said land and, in event it exercises such option, it shall be subrogated to the rights of any holder thereof and may reimburse itself by applying to the discharge of any such mortgage, taxes or other lien all rentals or royalties accruing hereunder. Lessee may at any time surrender this lease by delivering or mailing a release thereof to Lessor or by placing a release of record in the proper county.

10. Should Lessee at any time during the life of this lease pool its interest hereunder with other leases situated upon the same geologic structure, for the purpose of the development and operation of all such leases as a unit, Lessee may include the royalty interest in such pooling arrangement and it is agreed that Lessor shall be entitled to participate in all of the royalties accruing from the pooled acreage upon the same relative basis as Lessee shares in the production from the pooled acreage; Lessee to provide Lessor with a copy of the pooling agreement.

11. Lessor hereby agrees for himself, his successors, and assigns, that Lessee shall have the option to extend the fixed term of this lease for a like term and on the same conditions and for the same consideration as herein provided. Lessee may exercise such option by filing within sixty days prior to the expiration of the fixed term, in the proper recording office in the county in which the land is situated, its notice of extension and by depositing the consideration in the above described bank to the credit of the lease.

12. No implied covenant, condition or obligation shall be read into or held to be a part of this lease, nor shall the failure to keep, perform or discharge any such purported covenant, condition or obligation ever be a ground for the forfeiteure or cancellation of this lease.

13. If Lessor owns a less interest in the leased land than the fee simple estate or the entire interest in the oil and gas under said land, then the rentals and royalties accruing hereunder shall be paid to the Lessor in the proportion which his interest bears to the entire fee simple estate or to the entire estate in said oil and gas.

14. This lease and all its terms, conditions and stipulations shall extend to and be binding on all successors of Lessor and Lessee.

IN WITNESS WHEREOF we sign the day and year first above written.

.....

.....

"Committee of Nine" Begins Work January 23

Organization meeting held at Washington on December 10 arranges open hearing and asks information from public

By CLARENCE L. LINZ
Staff Representative

Washington, D. C.—Public hearings on the question of oil conservation litigation will be held by the "Committee of Nine" representing the government, the oil industry and the bar of the country, beginning January 23, it was announced following the organization meeting of the committee December 10.

Suggestions in writing have been invited from all interested sources, to reach the secretary of the committee by January 10, by which date, also, it is desired that all persons desiring to be heard at the public hearings make that fact known.

Resolutions adopted by the committee declared that it "will welcome all constructive suggestions that may be offered by persons within or without the petroleum industry, relative to the conservation of gas and oil and the maintenance of ground reserves thereof."

Prior to the meeting of the full committee, the representatives of the American Bar Association met and delegated Henry M. Bates, dean of the law school of the University of Michigan; James A. Veasey, counsel for the Carter Oil Company, Tulsa, and Warren Olney, Jr., of San Francisco, as the lawyer members of the committee. At the meeting of the committee later, Mr. Bates was selected chairman, and Assistant Secretary of the Interior Edward C. Finney, vice-chairman.

An earnest plea for more whole-hearted cooperation by the executives of the oil companies, "actuated by a more thorough realization of the common interest," was made by Secretary of the Interior Work, chairman of the Federal Oil Conservation Board, at the initial meeting of the "Committee of Nine" which promulgate a legislative program for conservation, at the Interior Department, December 10.

Following a meeting of the committee of lawyers chosen by the American Bar Association, at which the three delegates from that organization were selected, the full committee of nine was addressed by Secretary Work, and the situation of the past few years reviewed as a basis for their deliberations. Successful accomplishment of the task before them, the committee was told, is vital to the country's future industrial development and security.

"The unprecedented flood of oil during the past year cannot be construed as a forecast of continued plenty or the existence of unlimited resources, but rather and very properly it should be viewed as an unnecessary draft upon the underground reserve so largely in excess of current needs as to necessitate large capital outlays for additional storage facilities," Mr. Work declared, in urging cooperation by the oil company heads.

"It is the hope of this board that the committee of nine now about to function will survey the past and present, and attempt to visualize the future in so far as it relates to petroleum development, physical, economic and legal, and determine upon a constructive program in the interest of practical conservation of the country's oil resources. There are several schools of conflicting thought concerning legislation. Both opponents and proponents of each are leaders in their respective fields and all are entitled to respectful consideration. Whether the federal government possesses power to legislate concerning petroleum production; whether the anti-trust laws should be amended, whether State laws should be amended to a definite degree of uniformity, are questions this committee of nine doubtless will consider. At this juncture, may I venture the suggestion that comparatively recent important discoveries in the science of producing oil would seem to require new legislation if effective and lasting benefits are to be realized through the proper application of these discoveries to present-day production.

"Sufficient crude oil is now in storage to supply the refineries for six or eight months. The oil industry has had forced upon it the heavy burden of carrying above ground in steel and concrete tanks an excess supply that could better have remained below ground in its natural reservoirs. I am sure that industry and government alike realize that every oil pool discovered, developed and drained reduces by one the pools available for future needs.

"Excess production of an expendible resource like petroleum is never advantageous. Too often the small operator is forced to the wall in a period of low prices, while the large corporation suffers only decreased profits. Moreover, the reduction in price of crude oil at the well only in part reaches the buyer of gasoline at the filling station, and lowered prices to the consumer in 1927 are expected to be offset in future years by the much higher prices incident to depleted supply.

"This cooperative committee of lawyers, engineers and government representatives should consider only legislation whose purpose would be to protect our oil deposits against unecessarily rapid depletion and the public against future high prices of those oil products that must continue to be dominant factors in our industrial and social life."

The "Committee of Nine," besides the legal members named above, includes: Representing the government. Edward C. Finney, Assistant Secretary of the Interior; Walter F. Brown, Assistant Secretary of Commerce; Abram F. Meyers, member of the Federal Trade Commission. Representing the oil industry: Thomas A. O'Donnell, California Petroleum Company; J. Edgar Pew, Sun Oil Company; W. S. Farish, Humble Oil and Refining Company.

Underground conditions and the escape of gas in the drilling of wells were suggested by Secretary of Commerce Hoover, in addressing the committee, as problems well within the scope of its intended investigations. He also touched upon the economic necessity for preserving oil and preventing waste. Secretary of War Davis and Secretary of the Navy Wilbur also spoke briefly, the latter pointing out that if reserves of oil were exhausted the national defense would be jeopardized.

Best Oxford Well Makes 2350 Barrels Day

Oxford, Kansas.—Oxford's townsite field early last week got its best well in the history of production there when Roxana's Emrich 4, located in the northwest of the southwest of the southeast of section 14-32-2, about a half mile south of the townsite production proper, made 2350 barrels in 24 hours after showing a single hour gauge of 144 barrels. The Tonkawa sand was topped at 1994 feet and drilled to 2105 feet, and the well was shot with 140 quarts.

Last week Meade Brothers' Gasaway 1, which extended the field a mile southwest of town, made a daily average of 107 barrels, while Roxana's Rothwell 1, a north offset completed December 2 as the best well at that date, had a daily average during the past week of 1382 barrels. These two outstanding producers ran the daily average of the Oxford pool to 10,511 barrels, and placed the field far ahead of other Kansas fields in interest.

Opinions concerning the potentialities of the Oxford townsite field have been materially changed since the successful play along the trend leading to the southwest of the town. From present indications Oxford bids fair to emerge into one of the most active and profitable spots anywhere in the Mid-Continent area.

More Seminole Pools Promised as Old Wells Decline

Barnsdall well south of Earlsboro and west of Bowlegs will be shut in; making plans for proration extension

By WALLACE DAVIS
Staff Representative

TULSA—A survey of the Greater Seminole area Tuesday of this week shows, when compared with the situation one week previous, that in the face of a 25,000-barrel drop in daily average production and a slump of 18 in field operations the situation is in reality no brighter unless the possible drilling campaign growing out of new sources opened during the week is held under control by operators.

Barnsdall Oil Company has opened a new field about six miles south of Earlsboro and four and one-half miles west of Bowlegs, Fife 1, in the northeast of the northwest of section 14-8-5, completed late last week from five feet of Wilcox, topped at 4192 feet. The well Sunday morning gauged 1360 barrels and preparations were under way to shut it in immediately. Barnsdall will cooperate with the shutdown committee in prorating the well's output, and offset acreage holders to the well, with one possible exception will not drill while the crude situation is in its present depression. On the 80-acre Barnsdall lease is a one-acre tract which sometime ago was set aside by the government as school land. Oil rights on this acre are now owned by a Wewoka citizen, who has declared his intention of drilling. Proration officials were taking measures late last week to withhold any such action, and a favorable agreement was believed in the making.

Another potential producing spot loomed Tuesday with Barnsdall's Hotulka 1, in the southeast of the northwest of the southeast of section 22-7-6, drilling at 4200 feet with 1500 feet of oil in the hole. This wildcat is located three quarters of a mile south and slightly west of Independent's Harris 1, a pool opened November 1. Hotulka 1 made 160-barrel flow Monday and was shut down for connections. About the same distance to the southwest, Mid-Continent Petroleum Corporation's Manuel 1, in the northeast of the southeast of the northwest of section 27-7-6, offered a failure, having 2600 feet of water in the hole Tuesday morning while drilling at 4316 feet. The Simpson was topped here at 4240 feet and an oil show encountered at 4265 feet. This hole, if a confirmed failure, apparently cuts off possible production to the south in this vicinity .

Seminole's gauge Tuesday morning totaled 381,678 barrels from 1048 wells, an average of 364 barrels per well. The yield and number of wells by fields was as follows:

Bowlegs 289 wells, 111,545 barrels; Earlsboro 284 wells, 151,623 barrels; Seminole City 320 wells, 54,459 barrels; Searight 69 wells, 21,991 barrels; Little River 86 wells, 42,060 barrels.

Weather Effects Output

Following a gradual drop from around the 430,000-barrel mark to 406,000 barrels of December 8, the field took a sudden slump December 9 of more than 20,000 barrels and on December 10 went to slightly above 378,000. The big drop, chiefly the result of freezing weather, has climbed back to 384,000 barrels and over the week end hinged around this level with only a slight fluctuation downward.

Monday of this week there were 150 wells drilling in the five fields, nine rigs up and seven locations staked. Twelve locations were inactive. This is a decline of 18 operations within the past week.

Barnsdall's Fife 1 brings the number of wildcat pool openers with strong potentialities to five and Hotulka 1 had the earmarks of a new pool opener. Outside of these there are three possible fields in other discoveries, although they fail to show the same possibilities. They are Gypsy's Solomon 1, in section 21-10-7; Gypsy's Cinda Brown 1, in section 33-8-6, and the Prairie Oil and Gas Company's tests in section 24-9-5.

The gist of such a situation apparently is that new discoveries in the area offer possibilities of as much oil as had been produced from the five proven pools, although such performance is unlikely. If the gentleman's agreement at Seminole continues to hold as it has held during the past three months, the area is destined to offer little trouble to an already deplorable crude situation. If development is started around the wildcat producers while the market continues weak, the operators are doing no less than "cutting their own throats."

The proration committee with Seminole operators, were discussing early this week plans for continuing the shutdown program into 1928, and while this was expected to be successfully put over without any opposition, a definite decision had not been made Tuesday morning.

Out of the record list of Seminole's many and various drastic fluctuations, the past week probably registered the greatest. While the daily yield of the area was falling 28,000 barrels within three days, a drop chiefly due to freezing weather, a new pool was being added to the list, a second was apparently in the making, and Little River field was getting an extension on the south side of more than a mile. Simultaneously, another wildcat to the south of the Seminole area, which has been shutdown for several months with a show indicating further new productive area, was preparing to resume drilling to test its chances for a producer in the Wilcox.

While Seminole last week took the first step in the big drop long expected, most of the credit had to be given to cold weather, which materially curtailed the output temporarily. At Friday morning's gauge the total output fell to 378,604 barrels. General opinion was that following the thawing out of things in the territory this level would again be raised somewhat to meet a point of natural decline that is under way.

Snowden & McSweeney's Tiger 1, in the northwest corner of section 13-7-6, a mile and two locations south of Little River production, is estimated as good for more than 700 barrels. It flowed by heads after barely penetrating the Wilcox at 4315 feet Tuesday of last week, and plans were under way to shut it in to conform with the shut-in program. While it stands out as more than an extension, it is not being considered under the class of new pools, although dry holes between it and the Little River pool proper define a line of demarcation. The fact that this same situation has been found within the five major pools proper to split the productive area brings this well under the extension class.

Little River

At the close of the week the west side of Little River field was showing up for some good edge wells. Prairie Oil & Gas Company's Dungan 3, in the northeast corner of the northwest of the southeast of section 35-8-6, had 1000 feet of oil in the hole Saturday morning after topping the Wilcox sand at 4454 feet and penetrating it two feet. Carter Oil Company's Fish 5, in the northwest of the southwest of the same section swabbed 40 barrels from Wilcox topped at 4223 feet and penetrated nine feet. On the east side of Little River Sinclair's Cosar 1, in the southwest of the northwest of the northwest

of section 36-8-6, swabbed 55 barrels from the Simpson at around 4345 feet after topping it at 4334 feet, and was drilling deeper below 4150 feet December 7. On the same day Magnolia's Cruse 1, in the northwest of the southeast of the southeast of section 2-7-6, had 200 feet of oil in the hole at 4206 feet, after finding the Viola at 4124 feet. Tidal's House 3, in the northeast of the northwest of section 1-7-6, swabbed 927 barrels from the Wilcox at 4125-34 feet. Carter Oil Company's Fish 6, in the southwest of the northwest of section 36-8-6, swabbed 205 barrels in seven hours December 7 from Wilcox at 4202 feet.

The Texas Company's Anderson 7, in the southwest of the southeast of section 2-9-5, Earlsboro, flowed 230 barrels in 12 hours from 4278 feet December 9. Barnsdall's Davis 4, in the northeast of the southwest of the northwest of section 11-9-5, flowed 125 barrels December 9, while drilling at 3625 feet at the base of the Earlsboro sand.

In the Bowlegs pool Magnolia's Van Buskirk 1, in the southeast of the northwest of the southeast of section 9-8-6, swabbed 95 barrels from 4225-28 feet December 7 and increased on the following day to 320 barrels. Pure Oil Company's Strothers "D' 7, in the southeast of the southwest of section 11-8-6, swabbed 46 barrels in six hours December 8.

Transcontinental Plant at Houston Rumored

Houston—According to an unconfirmed report, the Transcontinental Oil Company has purchased 1600 acres of land on the Houston Ship Channel near the Crown-Central refinery as a site for the tank farm and refinery which it has been planning to establish.

It was learned definitely through an interview at Pittsburgh, on December 13, with A. B. Dally, member of the board of directors of Transcontinental, that the company has been contemplating buying land near Houston for a refinery and tank farm, and that the company also was planning to build a pipe line from the Yates field, Pecos County, to the proposed Houston tank farm, so as to have oil at Houston for shipment to foreign countries and to points along the Atlantic coast. Mr. Dally said that he last heard of the project about 10 days previously, when he and other officials of the company discussed the plans.

The Transcontinental Oil Company and Mid-Kansas, subsidiary of the Ohio Oil Company, jointly hold extensive producing land in Pecos County; and the two companies will sponsor the pipe line project jointly on a 50-50 basis, according to Mr. Dally. He could not give definite dates as to when the plans would be carried out, but indicated that action would be taken in the immediate future.

Production Decline in Oklahoma General

Tulsa—With the recent sharp slump in the production of Seminole's five proven fields and indications generally offered that production there will continue to decrease with the rapid weakening of the gas pressure and curtailment of field activity, the situation is further brightened by decreases in practically every other field in Oklahoma.

During the week ending December 7 there were only two fields in three of the leading productive districts of Oklahoma that registered an increase, and these combined were only up 90 barrels in daily average as compared with the preceeding week.

The following table shows the downward tendency of production by fields in the three districts:

Field—	Wells	Daily Average	Fluctuation in Bbls. Decrease
Bethel	50	976	94
Cromwell	393	10,921	†88
Holdenville	8	85	5
Papoose	217	5,801	124
Pearson-St. Louis	57	8,013	724
Wewoka	212	10,166	373
Yeager	17	392	50
Wildcats	25	1,063	289
Bowlegs	286	121,833	10,090
Earlsboro	283	174,226	1,041
Little River	77	39,094	2,350
Seminole	321	57,646	1,430
*Tonkawa	713	15,760	727
Otoe	30	1,120	101
Thomas	22	1,967	60
Hubbard	69	2,858	53
North Braman	89	2,887	181
Braman townsite	36	2,077	26
Burbank (Osage Co.)	1,826	31,897	...
(Kay Co.)	188	4,966	...
Total Burbank	2,014	36,863	401
South Burbank (Fairfax)	20	659	†2

*10,491 barrels of Tonkawa production was from 118 deep sand producers, while the remaining 595 wells producing from four upper sands had a daily average of only 5,269 barrels.
†Increase.

Osage Auction Sale Nets $2,267,000

Tulsa.—Out of 125 Osage tracts offered on December 12 at Pawhuska, 119 brought $2,267,000. These 119 tracts included 66 on the east side and 53 on the west side of Osage County.

Lewis Gas Products Company made the largest single purchase, paying $600,000 for Tract 117, the southwest quarter of 2-26-6. Carter Oil Company paid $465,000 for Tract 118, the southeast quarter of 3-26-6. Kewanee Oil and Gas Company paid $405,000 for Tract 125, the northeast quarter of 28-27-6. Prairie and A. G. Oliphant paid $300,000 for Tract 123, the northwest quarter of 21-27-6. The Texas Corporation paid $150,000 for Tract 121, the northeast quarter of 14-26-6. All of the big purchases lie along the eastern edge of Burbank field.

Buying, which was naturally slowed up considerably because of low crude prices and also due to two recent failures to the north of the Oliphant extension well (now Prairie), was stimulated by government rulings recently changed to allow one year of free rental on purchased tracts with five years of holding before forced development. Buying of tracts in rank wildcat acreage was also stimulated by a change in the bidding rules allowing the initial bid to run as low as $100, as against the former ruling of a $300 minimum.

Colonel Ed Walters, government auctioneer, stated that the sale results were as good as were expected, considering the oil situation, and that this sale probably established a record in the percentage of offered tracts sold.

East side tracts brought only $56,150, being wildcat acreage.

Deepen Wildcat

Los Angeles, Calif.—After a lengthy suspension, the Burlingham wildcat near Palmdale will be drilled deeper. The well was started two years ago as a cable tool test, but will be finished with rotary equipment. Slight showings of oil were found around 1,100 feet and several feet of gas sand was penetrated below 1,600 feet. There was also a good showing of oil with the gas. Government geologists frowned on the area, but independent geologists have looked with some favor on the test.

Will Educate Field on Proper Use and Care of Equipment

(Continued from page 36)

to make some progress in their standardization.

Summarized Report of the Special A. P. I. Correlating Committee on Gages and Gaging Practice

H. W. Fletcher, Chairman

It is reported that the Master Gage for Sucker Rods will be in the manufacturers' hands by February 1, so that the official A. P. I. Sucker Rods with monogram should be available to the public some time in early 1928.

On the Line Pipe specifications the A. E. S. C. stand-off values were retained on the sizes 2-inch and over. This brings the A. P. I. Line Pipe Gage specifications in agreement with the A. E. S. C. Gage now in existence, the use of which is authorized in the A. P. I. Line Pipe specifications.

It was agreed to rewrite the specifications on Pipe Gages in simpler form, to be incorporated in the next edition of the specifications.

The revisions in the tolerances on the Line Pipe Gages, as submitted by the Pipe Committee, were approved—the principal change being the addition of one-half-inch turn tolerance on eleven and one-half-inch threads and smaller.

It was also agreed that the Physical Testing Laboratory at Teddington, England, be authorized to certify new A. P. I. Pipe Gages should it be called upon to do so.

The question of a reduced stand-off on Drill Pipe, as submitted by the Rotary Drilling Committee, was discussed, and a motion was passed to the effect that stand-off values be changed from four and-half-inch to four-inch threads with the same tolerances as at present. This recommendation of stand-off on Drill Pipe thread was made for the benefit of the Rotary Equipment Committee and is not made as a decision of the Gaging Committee.

Hendricks Field Production Passes 50,000 Barrels

Opening of big wells follows completion of more tanks and pipe line facilities and more wells are to be opened

By H. H. KING
Staff Representative

SAN ANGELO, Texas—Production in the Hendricks field averaged slightly above 50,000 barrels daily during the past week as the result of new tankage being completed in the field. The gain was largely due to the opening of big wells that have been partially pinched for some weeks and this increased drainage upon the field is forcing the completion of a number of tests held back on the pay as well as the starting of new operations.

Big production was scored on the north end of the Hendricks field early this week when the Republic Production Company's Grisham-Hunter 1 "A", located in the northwest corner of the east half of the southwest quarter of section 45, gauged 6000 barrels of 30 gravity oil during first 24-hour period ending Tuesday morning. This well topped the oil pay at 2800 feet, and the big pay at 2864-67 feet. This is the first completion for Republic in the field, and the oil is to be handled by the American Petroleum Company's six-inch line to a tank car rack near Wickett. The American is a subsidiary of Republic, and this will permit the latter to flow its wells wide open.

Stocks Piling Up

Crude stocks are beginning to pile up rapidly in the Hendricks field, and at the close of November there were 457,000 barrels on hand, while 296,000 barrels of storage oil from this field has been accumulated at tank car racks in Ward County.

Total crude stocks in the West Texas district at the close of November amounted to approximately 11,702,300 barrels, while total storage capacity completed and building in the district exceeds 24,000,000 barrels.

Gas pockets encountered by the Amerada Petroleum Corporation's Walton 1, which is trying to establish production three miles east of the Hendricks field, caused several fishing jobs during the past week while drilling slightly below 2400 feet. More interest is being shown in the outcome of this test than any other in Winkler County, as it is believed to be on a separate structure from the Hendricks field.

The Hendricks field is to have more local and direct pipe line connections than any single area in West Texas when present projects are completed, and plenty of oil for all the lines is now promised for a long period. The Texas Pipe Line Company joined the group of concerns building into this field during the past week, and ordered materials for the laying of an eight-inch line to McCamey, where the crude will be shipped in cars via the Orient Railroad and allied lines to the Gulf Coast. Shell Pipe Line Company is building a six-inch line from McCamey to the Hendricks field, while Humble Pipe Line Company is doing likewise with a combination eight and ten-inch extension to its trunk line system. Southern is paralleling its six-inch line to rack at Wickett with an eight-inch, while Independent Oil & Gas Company is also laying an eight-inch to car rack. Atlantic Oil Production Company is well under way on its 10-inch line from the Hendricks field to a tank farm at Midland. Ocean Oil & Pipe Line Company is the only independent crude buyer building into the field, although the Bell Oil & Gas Company and the Plains Pipe Line Company have promised to move a part of their Texas Panhandle gathering system to Winkler County if satisfactory crude contracts can be had. American Petroleum Company is operating its six-inch line to rack, but confining its runs to contracts held with Murchison & Cranfill and Cranfill & Reynolds, and the oil produced by the Republic Production Company, an affiliated concern.

Galena-Signal of Texas in Receivership

Houston—On application of the Galena-Signal Oil Company of Franklin, Pennsylvania, Judge Monteith of the Sixty-first District Court last Thursday, December 8, appointed McDonald Meachum of Houston receiver of the Galena-Signal Oil Company of Texas. The refinery and principal properties of Galena-Signal of Texas, are in Houston, but the company has numerous assets in other States and in foreign countries.

The Texas concern is a subsidiary of the Pennsylvania company, which owns all the capital stock of the defendant company. The Fidelity Trust Company of Houston is made a party to the suit because it is the trustee for the bondholders.

The status of field operations in the Hendricks field, Winkler County, Texas, at the close of last week is shown below by companies:

Companies—	Locations & Rigs	Drilling Tests	Tests in Big Lime	Completed Wells	Initial Production	Present Production
Amerada Petroleum Corp.	..	..	1	..	....	....
Arizona Mining & Eng. Co.	1	..	..	..	....	....
Atlantic Oil Prod. Co.	2	2	4	1	2,700	*2,375
Atlantic & J. D. Collett	1	..	..	..	....	....
V. T. Bolin & Company	1	..	..	..	....	....
Cranfill-Reynolds	1	..	1	2	11,500	7,075
Eastland Oil Company	..	..	1	..	....	....
Gulf Production Co.	3	..	1	5	14,895	*5,955
Humble Oil & Ref. Co.	2	..	3	2	5,900	*5,045
Independent Oil & Gas Co.	6	1	2	2	7,550	*3,400
Landreth Prod. & Roxana	2	..	2	2	3,000	*6,355
Magnolia Pet. Co.	1	1	2	1	3,200	2,010
Joe Maxwell & Turman	1	..	3	1	....	*75
Murchison & Cranfill	3	..	3	3	5,600	1,155
Republic Prod. Co.	..	1	2	..	....	....
Roxana Petroleum Corp.	4	1	3	1	10,000	*5,725
Sheldon & Burden	..	..	1	..	....	....
Southern & Westbrook	3	3	9	2	6,585	6,200
Southern & Dixie	4	..	6	6	7,260	*4,245
The Texas Company	1	..	5	1	5,000	*490
Texon Oil & Land Co.	..	2	2	1	1,600	1,310
Totals	36	11	51	30	84,790	51,435
Totals previous week	28	15	49	24	75,160	38,870

*Production partially pinched.

The Texas Company Buys Pure Oil Company Leases in West Texas; Will Build Line

San Angelo, Texas—A pipe line construction program has been announced by The Texas Company for the West Texas district to follow the purchase of all proven and semi-proven leases held by the Pure Oil Company in the Hendricks, Yates, McCamey and Church & Fields areas, aggregating 3,113 acres of leases with two completed oil wells and five drilling tests. Officials of the two companies agreed on the terms of the sale last week in Chicago while attending the annual meeting of the American Petroleum Institute, and The Texas Company took possession of the properties December 10, although the consummation of the deal hinges on approval of titles.

Materials have been purchased by The Texas Pipe Line Company to start work immediately on the construction of an eight-inch pipe line from the Hendricks field, Winkler County, to McCamey, a distance of about 80 miles. This line is to permit The Texas Company to proceed with the completion of the five tests held on top of the pay on two 160-acre leases in the heart of the Hendricks field, and also to open up the single completion, which made an initial flow of 5,000 barrels of 30-degree gravity oil daily, but is pinched to less than one-tenth of this amount. Six leases, aggregating 800 acres, were held by Pure in the Hendricks field; 1180 acres scattered over the McCamey field in six separate tracts; two tracts amounting to 1053 acres in the Yates field; and an 80-acre lease on the east side of the Church & Fields area have been turned over to The Texas Company.

Two 160-acre tracts in the Hendricks field and an odd size section of 413 acres in the Yates field must be developed promptly for drainage protection, and Pure elected to take a cash profit on its lease investment rather than to enter a pipe line construction and storage program on a large scale. Pure has not become a party to the Yates field proration plan, and was unable to find a local market at posted prices for the Hendricks field production. The disposal of these West Texas leases by Pure will not halt future activities in the district, as Pure retained its wildcat acreage and is adding to same.

The saving in freight rates to be had by The Texas Company in shipping West Texas crude via the Orient Railroad and joint lines to the Gulf Coast is responsible for the building of the long line from Hendricks field to McCamey, where a small tank car rack is already being operated for handling the company's McCamey district production. A direct trunk line outlet from the district will probably be built by The Texas Pipe Line Company after production has been increased to a level that would justify such an expenditure.

Influence shown in recent months by West Texas crude in the Gulf Coast fuel oil market is believed to be a factor in The Texas Company moving to obtain a large amount of this grade of oil. Gulf Coast refiners operating on cheap West Texas crude have successfully gained large fuel oil contracts with low bids, while the plants operating on higher priced Mid-Continent and Coastal oils have been unable to meet such competition.

Pierce Junction Extended 600 Feet South

Houston—Pierce Junction was extended 600 feet this week by Rio Bravo Oil Company's P. S. "A" (Settegast) 7, in the southern end of the west side of the field. This well is 2240 feet south and 125 feet east of the northeast corner of the Settegast "A" lease, and is about 600 feet south of Rio Bravo's Settegast A-6, the nearest producer. Initial flow was only 200 barrels. Depth, 3734 feet, is about the same as various other wells in the field; but it is evidently producing from a new sand, as the oil is heavier than the usual production at the same depth, testing 23.6 gravity.

Two other tests completed at Pierce Junction during the week included Moody Corporation's Hume 2, which came in for a flow of 1500 barrels, 20 per cent b.s. and water, the depth of the hole being 4350 feet; and Rio Bravo's G. H. & S. A. 1, which was abandoned in salt at 3150 feet.

The total number of completions in the Texas Gulf Coast section was 16, including four wildcat failures, two abandonments in proven fields, and 10 oil producers of a combined initial yield of 4870 barrels. In Coastal Louisiana there were seven completions, including three wildcat failures, one failure in a proven field, and three producers of a combined initial of 1285 barrels.

West Texas Chamber To Discuss Oil Situation

Wichita Falls, Texas.—Conservation, legislation, cooperation, and other matters of paramount importance will be discussed at the meeting of the Oil and Gas Bureau of the West Texas Chamber of Commerce at San Angelo on January 25, the day before the annual West Texas Petroleum Convention.

In calling the meeting of the bureau, W. B. Hamilton of Wichita Falls, chairman, pointed out the need for curtailment of drilling in flush fields, and said that the bureau would lend every support possible to continue the Farish plan of prorating runs, which, he said, "seems to be the most efficient method of preventing bringing to the surface millions of barrels of oil that cannot now be marketed." He commended the Humble Oil & Refining Company for its patriotic service in carrying out the pro-rating system, which necessarily greatly limits its own production.

Another of the important subjects to be considered at the San Angelo meeting, according to Mr. Hamilton, will be in regard to the suits brought by the attorney general in his attempt to have declared unconstitutional the relinquishment statutes passed by the State Legislature, releasing to owners of school lands in West Texas fifteen-sixteenths of the oil and gas produced from such land, reserving to the school lands one-sixteenth of such production. Concerning this subject, he said: "We believe the suit attacking the title to the lands proven valuable by the expenditure of money and labor on the part of the land owners, lessees, is causing hardship on innocent purchasers of the property and is adding additional financial burden upon the oil operators in West Texas, due to the difficulty in securing money with which to develop the properties."

Further outlining the plans for the meeting, Mr. Hamilton said: "There will also be discussed the question of excess lands and the filing on same by surveyors and others who make it a practice of going into the fields and attempting to find excess lands and file on same with the State of Texas, depriving people of property which they had held under surveys made by the State previously, resulting in litigation and additional costs."

Members of the bureau hope that many leading oil men of the nation will be able to attend the sessions and to assist them in the work that has been planned.

Conservation Foremost Subject at Chicago Meeting

(Continued from page 27)

properly used in the field. A number of sample posters on proper methods and practice were approved at the meeting and will be generally distributed to the industry.

Further action of the Board of Directors at Chicago included a resolution opposing the proposed bill recommended by the Committee on Commerce of the United States Senate in relation to a government-owned merchant marine, and the acceptance of the recommendations of the Committee on Uniform Methods of Oil Accounting in regard to the uniform published income statement and a uniform surplus analysis.

Reports were also made to Board on work accomplished by the Committees on Oil Pollution, and Public Relation.

Near Oxnard

Oxnard, Calif.—The Shell Company is considering the drilling of at least one well on its holdings near this place. The company has more than 10,000 acres under lease along the Santa Clara River, and recently obtained permits for drilling from several property owners. No definite drilling program has been announced. Several other large companies hold large blocks of land near this city. The Shell Company drilled a test on the Friedrich property last summer but did not disclose the results.

Deep Sand Producer in North End Of Long Beach

Well making 4400 barrels practically proves several large leases; Seal Beach declining with town-lot area inactive

By BRAD MILLS
Staff Representative

LOS ANGELES.—The deep zone along the north side of the Long Beach field has been proven by the completion of the Richfield Oil Company's Hoffman 1, which came in with an initial production of 4,400 barrels. The new well is the first to be completed in the immediate area and practically proves several large leases.

The completion of such a well unmistakably has an important bearing upon the future production of the field, and adds weight to the prediction that the largest wells will be completed near the edge of the present producing limits. Other large wells will be completed, but it still seems fairly safe to predict a maximum production of 150,000 barrels. Estimates of 200,000 barrels have been made, but they seem somewhat out of line. If wells near the center of the field improve in the deep sand as those around the edge have done, the higher estimates seem entirely reasonable. The few wells that have been recompleted near the heart of the field were comparatively small, however, and are expected to average only a fraction of the figure established by some of the largest edge completions.

The Richfield's new well started flowing before tubing was run and is producing through a full string of 5¾-inch casing. The total depth was 6,010 feet. A flow of 3,500,000 cubic feet of rich gas is accompanying the oil. The crude is unusually clean and is about 30 gravity. The Richfield Oil Company recently acquired the Hoffman property with several other valuable leases. The company is now the third largest producer in the field.

Graham & Loftus, independent operators, completed Butler 1 with an initial production of 2,230 barrels. The well was drilled to 5,995 feet. Like other large wells, it was located near the edge of the field.

Proving that even the edge wells are not always especially productive, the Union Oil Company has completed L. B. C. 13 as a small producer. The well flowed only 183 barrels in 16 hours. The crude was 27.2 gravity and cut six per cent. Gas production is 1,000,000 cubic feet.

Potrero Test Unsatisfactory

The Associated Oil Company has given Cypress 1, the discovery well in the Potrero field, another production test, but the results were far from satisfactory. A string of 4¾-inch casing was cemented at 5,276 feet and the well drilled to 5,408 feet for the test. The well flowed at the rate of 400 barrels, but the fluid was 90 per cent water. Production was coming from more than 100 feet of oil sand. The well will be recemented for a second test. The Associated has issued no statement as to its plans, should the discovery well prove a failure in the deeper sands, but it is thought that another well will be drilled. Several hundred feet of oil was found at different levels, but the presence of water at several different places indicates that the well is located slightly off structure.

The Pan-American Petroleum Company has been unable to shut off the water in State 1, which might be termed the discovery well in the Rincon field, although the well made a fairly creditable showing when allowed to produce from only a few feet of sand. The well was plugged back to the top of the sand and drilled only a few feet to test the portion of sand that prematurely flowed comparatively clean oil several weeks ago. The well produced at the rate of 1,150 barrels. Water had been reduced to 10 per cent of the total production, when the well suddenly died. The tubing pressure was 225 pounds and the casing pressure 400 pounds. Gas production had increased to one-half million cubic feet. The company will lower the tubing before swabbing the well, preparatory to still another test.

Seal Beach Declining

The action of the Seal Beach field confirms the general belief that production from that area will decline slowly over a period of several months. The townlot area is very inactive and seems to have run its course. Efforts have been made to prove a still deeper sand, but only a small production was found in one of the 6,000-foot wells. The intensive drilling has taken much of the fire from the hasty operators and it will be some time before a concerted effort is made to develop a deeper sand. It is safe to say that less than half of the present wells could be deepened if there was a necessity for it. The gas pressure has declined in the Wasem sand and many methods are being used to coax more oil out of the sand. Air and gas compressors have helped in many instances. The main part of the field continues to produce at a remarkably consistent rate. Sensible drilling has developed a production so steady that it has declined only a few thousand barrels from the peak reached last summer. The townlot area is now producing considerably less than half as much as during the peak early last fall. Abandonments are being reported in rapid order. Many of the wells were drilled to the producing sands without results, some were drilled only a few hundred, and many locations never boasted more than a rig. A summary of operations in the field does not resemble the data of several months ago.

The performance of the discovery well in the Round Mountain field has done much to offset the failure of all efforts to complete another producing well on the structure. No. 1, which was completed early in the summer by the Elbe Oil Company, is occasionally allowed to produce, and its action never fails to bolster the courage of the several operators who are striving to extend in at least one of several different directions. During the most recent test the well produced 600 barrels in one day. Recent developments support the belief that the field will be a small one. The discovery well at least shows that the best part of the field will produce oil free from water, and in quantities large enough to justify the drilling of many wells. The Shell Company's deep well on Section 20-28-29 is now drilling at 3,640 feet, but has shown no improvement for several hundred feet. The well is only a short distance south of the discovery well. The Associated Oil Company is expected to enter a possible oil-bearing formation within a few hundred feet in its test on Section 34-28-29.

Richfield Steady

The Richfield area, which has been in the limelight at frequent intervals for several years, has had nothing sensational to offer several months. Production has steadied, however, and little change has been noted during the fall months. The California Petroleum Corporation has completed Bradford 7 with an initial production of only 100 barrels. The well was completed at 4,700 feet and carries a string of 8¼-inch casing in addition to a 6¼-inch oil string. The oil cut nearly 50 per cent. An unusual situation exists on the extreme eastern side of the field, where many of the best wells have been completed near a large fault. Many of the wells were practically failures in the upper sand, but produced satisfactorily in the deeper zone.

The Standard Oil Company has completed another small well in the Wheeler Ridge field, which is one of the smallest producing areas in the State. The company's No. 31 was finished at 2,565 feet with an initial production of 40 barrels. The oil was 13 gravity and cut 25 per cent. The well was not up to the stand-

ard set by the first producers. The Standard Oil Company practically controls the entire field and has been very slow in developing it. There is very little demand for such heavy oil, and it is generally understood that the field would not be developed if the land-owners did not require the operating company to drill the number of wells specified in the lease agreements.

The Midway and Sunset fields, which extend for miles along the west side of the San Joaquin Valley, are as inactive as they have been for years. A handful of wells are drilling and a few are being reconditioned; but the bustle of activity is distinctly missing. The field has been extensively but not intensively drilled over a period of 35 years. Due to its size, the wells are spaced several hundred feet apart and produce at approximately the same rate month after month. Nearly all wells are pumped, as the gas pressure has been greatly reduced.

The Goleta field, which started off with so much promise, has become a negligible factor. The light oil sands in the district contain layers of water sand and few wells have been completed satisfactorily. A deep test recently was abandoned, leaving the tricky upper strata to bear the burden. The light oil sands are found at only 1,500 feet.

Kern Front

Comparing favorably in number with other larger areas, completions in the Kern Front field continue in a steady stream. Five new wells were ushered in during the week. With field operations gradually dwindling, completions are expected to show a decrease during the next month. The field has been developed much faster than other black oil areas in the immediate vicinity, with the possible exception of the old Kern River field, which has about 2,000 wells. Initial production per well is considerably smaller than that recorded six months ago. The Chanslor-Canfield Midway Oil Company completed No. 10 as one of the best producers of the week. The well was finished at 2,285 feet with an initial production of 180 barrels. The Standard Oil Company, which is one of the largest operators in the field, completed No. 20, Section 15-28-27, as a 180-barrel well. Total depth was 2,280 feet. The oil showed a nominal cut of three per cent. The General Petroleum Corporation completed Young 20 at the comparatively shallow depth of 2,070 feet. Production was 125 barrels. George F. Getty and the Petroleum Securities Company each completed small wells. The former's Lenhart 17, section 14-28-27, was completed as a 90-barrel well at 2,315 feet, while the latter's B-2, section 22-28-27, pumped 75 barrels from 2,662 feet. The Petroleum Securities' producer was unusually deep and its showing was a keen disappointment.

Tricky conditions in the Torrance field are well illustrated by the recompletion of the Standard Oil Company's Marble Fee 11, which was re-drilled to 3,785 feet. On the initial test the well produced about 20 barrels of fluid, of which one-half was oil. Water conditions in the field make the operation of many wells a problem. Operations are chiefly confined to deepening a few old wells.

The California Petroleum Corporation has greatly increased the production in Mattern 6, one of its early completions in the Santa Fe Springs field, by plugging back to 4,575 feet. After the well was reconditioned it produced at the rate of 200 barrels. Development in the field has practically been suspended. There is a decided tendency toward the application of the gas lift, where wells have ceased to flow or where pumping has been unsatisfactory.

Standard of California Wins Elk Hills Suit

Washington, D. C.—Title of the Standard Oil Company of California to a portion of the Elk Hills Naval Reserve was sustained by the District of Columbia Court of Appeals last week in a decision upholding former Secretary of the Interior Fall in approving of the title clearance and holding that Secretary of the Interior Work no longer has jurisdiction over the land.

Proceedings to test the validity of the transfer and title were instituted in the District of Columbia Supreme Court by the company, when an attempt was made to restore the land to the government under the resolution of the senate to recover all lands within the naval reserves. An injunction restraining Secretary Work from interfering with the title was secured, and the government appealed, the decision being upheld by the appellate court.

Los Angeles Shipments

Los Angeles, Calif.—The movement of petroleum products from this harbor during the past week was unusually heavy. Approximately 3,000,000 barrels of crude and refined products were loaded out for ports in all parts of the world. Shipments of fuel oil headed the list with 1,351,000 barrels loaded out for the various ports. The movement of gasoline was satisfactory, with 818,000 barrels consigned to world markets. The movement of crude oil amounted to 706,000 barrels. Pacific domestic and foreign shipments predominated.

Mt. Poso Extension

Bakersfield, Calif.—Extensions to the Mt. Poso field appear likely, as the result of promising oil sands found in at least two wells drilling more than a mile from the present producing limits of the area. The General Petroleum Corporation has cemented a string of 11-inch casing at 1,570 feet in its Glide 1, which is located more than a mile south of the Shell Company's producing wells in the Mt. Poso field. The Union Oil Company has also picked up layers of oil sand in Tribe 1, section 28-27-28, at about 1,650 feet. The Union well is located one mile south of the nearest production. The crude found in both the General Petroleum and Union wells is reported to be somewhat lighter than that produced in the main field.

Ohio Oil Officials Visit California

Bakersfield, Calif.—Several officials of the Ohio Oil Company recently visited this city, but did not make a statement as to whether the company is still considering leases in Kern County. The Ohio Oil Company negotiated for several weeks Company's holdings in the Round Mountain field, but finally withdrew. Officials of the company in the party were F. E. Hurley, R. N. Ferguson, E. E. Bolton, M. D. Worley and J. C. Hare.

Buttonwillow

Bakersfield, Calif.—The Milham Exploration Company is drilling another well in the Buttonwillow district with the idea of thoroughly testing the possibilities of its leases on section 8-28-23. The new well is located one-fourth mile from Kern 1A, which is now producing 4,500,000 cubic feet of gas through a very small opening. The Milham Exploration Company is anxious to develop a large gas production in the Buttonwillow district. The construction of a gas line to several cities in the San Joaquin Valley hinges upon the gas possibilities in the immediate region.

Temblor Area Extended

Taft, Calif.—A slight extension of the Temblor area has been made by J. F. Harrison, who recently completed a small well on section 36-29-20. The well was completed at 390 feet and pumped at the rate of 50 barrels. The oil sand proved to be more than 100 feet thick. Harrison had previously completed two shallow wells in the immediate region.

Cat Canyon

Santa Maria, Calif.—Two wells are nearing completion in the Cat Canyon field, which produces an extremely heavy oil. The R. & G. Oil Company has cemented the 11-inch casing at 2,945 feet in No. 7, section 30-9-32, and is preparing to drill into the oil sand. The Palmer Union Oil Company will soon complete No. 14, which is also located on section 30. There is a possibility that the R. & G. Oil Company will carry its well below the heavy oil sand to test lighter oil sands which may lie at a deeper level. A previous well showed some indications of production considerably below the regular sand. The gas lift has been very effective in producing the heavy oil in several wells. The installations have attracted the attention of operators all over the state .

Lease Near Delano

Bakersfield, Calif.—The Elk Oil Producing Company of Tulsa has leased a block of approximately 9,000 acres near Delano. The land lies along the Southern Pacific railroad. Representatives of the company stated that a well would be drilled near McFarland if enough acreage to justify the expenditure is acquired.

Seventy-Five Million Feet of Gas in Richland Parish Well

Shreveport, Louisiana.—Drilling for gas production in the Richland Parish field, 17 miles southeast of the Monroe gas field, and the continuation of the development of the recently discovered oil producing area in Union County, Arkansas, was the feature of the past week's activity in the North Louisiana and South Arkansas territory.

Successful completion of one of the largest gas wells ever brought in in North Louisiana fields was the high point of the week in the Richland Parish gas area, when Moody and Seagraves' McCoy 2, section 30-16-6e, blew the drill stem out of the hole from a depth of 2,406 feet, and ran wild for 36 hours. When gauged by the Minerals Division of the Louisiana Department of Conservation was credited with an open flow volume of 75 million cubic feet. This is the third well to be drilled in this field by the Moody and Seagraves interests, and is by far the largest well to be brought in in the field; and is said to be the largest well ever successfully completed in North Louisiana. The Moody and Seagraves interests own approximately 14,000 acres of leases in this field upon which they plan to drill a number of wells to furnish gas to their pipe line now under construction to Houston. They are said to also be interested in the recently revealed project looking toward the construction of a gas line to St. Louis, which, if it materializes, will furnish the necessary impetus for an extensive drilling campaign in this section.

Several of the larger companies are interested in the Richland Parish field, including the Gulf Refining Company, Natural Gas and Fuel Corporation, Moody and Seagraves, Palmer Corporation, Dixie Oil Company, Roxana Petroleum Corporation and the Southern Carbon Company. Because all available acreage is fairly well controlled by the major companies, there has been very little activity along these lines, although one of the largest acreage transfers of recent record within the state, involving leases within this field, was reported to have been closed several days ago, when the Gulf Refining Company sold its entire holdings in the field, embracing some 16,000 acres, to the Palmer Corporation, for a consideration said to be in the neighborhood of one million dollars, and certain overriding gas royalties.

Interest in the newly discovered producing area near Champagnolle, in Union County, fails to be subdued as the result of the rapid encroachment of salt water in the E. M. Jones Crain well, the latest completion in the field; and activity continues at a very rapid gait on all sides of the 40-acre lease upon which this well is located, as well as in the vicinity of the Ohio and Magnolia wells.

The E. M. Jones Crain well is now flowing through chokes at the rate of 3,000 barrels of fluid a day, 85 per cent of which is salt water. When first completed, very little salt water production could be detected in this well, but, when it was re-opened after having been closed in for a few days, pending the erection of additional storage and the installation of a gas separator, it began making water at the rate af about 40 per cent, rapidly increasing until it reached 80 per cent. During this time, the gross output of both oil and salt water also increased. The oil production is now being run into an earthen storage pit, from which point it is being picked up and treated on the lease at the rate of about 1,500 barrels daily. In the meantime, E. M. Jones is proceeding with the drilling of two additional wells upon the lease, having set casing in Crain 2, and is moving in a rig at the location for Crain 3. The Ohio Oil Company is also rushing work on several wells which they are drilling in the area, including their Crain 3, in which 6⅝-inch casing has been set at 2,988 feet; Crain 5, in which the final string has been set at 3,044 feet; Pumphrey 1, in which casing has been set at 2,986 feet; all located in section 1-17-14. This company has also made locations for two wells to be drilled in section 2-17-14. In all, there are 15 locations made and operations under way in the two sections, three of which belong to E. M. Jones, and 11 to the Ohio Oil Company. The Magnolia Petroleum Company has shut down Carroll 2 at 1,500 feet.

The Garrett-Modisette Drilling Company's Gregory well, section 10-17-14, south and west of the drilling in sections 1 and 2 of township 17, range 14, was put on the pump during the week, and produced 170 barrels of 19 gravity oil during the first 12 hours, from 2,765 feet. The oil production showed a water content of only 10 per cent during this time, indicating that it will be a nice pumper. This producing sand is found about 250 feet shallower than the producing horizon in the wells to the north and east; and is evidently the same sand as that found in the Rovenger Oil Corporation's well in section 4-17-14, which was pumped for several weeks at the rate of about 40 barrels a day, later being deepened to the 3,000-foot level in an effort to secure production from the more favorable appearing sand found in the Magnolia and Ohio wells. So far, this well has failed to develop production, and is now coring at 3,064 feet, after testing salt water at 3,052 feet.

The Trinity producing area, in Caddo Parish, remained unusually quiet, although several tests are scheduled during the present week, including three by the Dixie Oil Company in sections 14 and 23 of township 21, range 15. Cement is now being drilled out of the hole in Caddo Mineral Lands 9, in section 23-21-15, where it will be tested below 3,909 feet. Clark 9, section 14-21-15, is arranging to set 6⅝-inch casing for a test of the 3,600-foot formation, and Robertshaw 90, in the same section, is pulling 6¼-inch casing preparatory to drilling to the 3,900-foot level. Haynes Brothers are coring at 3,853 feet in Spell 1, section 15-21-15, and should make a test of the 3,900-foot sand during the week. The Magnolia Petroleum Company is coring around 3,890 feet in Robertshaw 21, section 23-21-15, and is drilling at 3,458 feet in Hampton A-9, section 15-21-15, both of which should reach the producing horizon before the week-end. The Texas Company has set casing in Mabry 10, in section 15-21-15, at 3,830 feet, and has also set in Raines 19, in the same section, at 3,968 feet. Both wells should be tested during the week. Provided all of the expected tests materialize, this should be an interesting week for the Pine Island deep producing area.

Second Deep Logan Well Showing Production

Tulsa. — With Roxana Petroleum Corporation's McCully 1, discovery well in northwestern Logan County, still making around 2400 barrels of pipe line oil from the Wilcox at 5987 feet with tools in the hole and the second test showing for a substantial producer at the close of last week, the Mid-Continent's deepest producing field was a second time coming into the limelight.

Roxana's Stepens 1, located in the southwest corner of section 29-19n-4w, made several heads late last week after topping the pay at 5865 feet, more than 100 feet higher than that found in the discovery well. The Viola lime was topped at 5829 feet, the hole had a show of oil and gas at 5845 feet, which increased as the well was deepened to 5865 feet. Three-quarters of a bailer of oil was obtained every time the bailer was run December 6. The well was being drilled ahead late in the week, going to the Wilcox sand. Stephens 1 is located one-quarter of a mile south of the discovery well, which is in section 30.

Welch, Acton & Brown's Hall 1, in the northeast of the southeast of section 11-18-4w, several miles southeast of the Roxana pool, was flowing 140 barrels and had 2000 feet of light oil in the hole from lime and shale at 478-85 feet, after finding a show of oil and gas in the Layton sand at 4748-59 feet. Harris & Haun of Blackwell, Oklahoma, who are drilling the well and who own an interest in it, were cleaning out cavings late in the week, and plans are to set six-inch near bottom in an effort to increase production.

West Texas Production

CRANE COUNTY

	Producing Wells	Daily Average Prod.
Church & Fields—		
Simms Oil Co. & Atlantic Oil Prod. Co.	27	26,275
Landreth Production Corp.	16	12,230
Tidal Oil Co. & Turman-Maxwell	22	9,665
Eastland Oil Co. & Collett-O'Keefe	8	8,340
Prairie Oil & Gas Company	11	*5,855
Humble Oil & Refining Co.	12	5,610
Magnolia Petroleum Company	29	5,275
Pecos Oil Company	11	4,020
Independent Oil & Gas Co.	6	*2,390
Gulf Production Company	10	1,540
Church-Fields & Bert Weekly	3	1,465
The Texas Company	2	240
Geo. Church & Bob Fields	2	200
Stidham & Thrasher	1	10
Totals	160	83,105
Gulf-McElroy—		
Gulf Production Co.	55	19,630
Gulf-Waddell—		
Gulf Production Co.	1	15
Marland-Hughes—		
Marland Oil Company	16	540
The Texas Company	9	250
McMan Oil & Gas Company	2	80
Independent Oil & Gas Co.	1	10
Totals	28	880
Totals for Crane County	244	103,630

UPTON COUNTY

The Texas Company	20	2,965
Texas Pacific Coal & Oil Co.	16	2,470
Marland Oil Company	78	2,260
Roxana Petroleum Corp.	36	2,160
Dixie Oil Company	36	1,880
Gulf Production Company	15	1,795
Prairie Oil & Gas Co.	8	1,260
Humble Oil & Refining Co.	10	920
Independent Oil & Gas Co.	26	755
Champlin Refining Company	3	530
Orient Oil Operating Co.	1	310
Amerada Petroleum Corp.	6	300
Sun Oil Company	10	205
Snowden & McSweeney	1	200
Republic Prod. Co. & Marland Oil Co.	5	110
Wentz Oil Corporation	3	105
Tidal Oil Company	3	100
Bryant & Atlantic Oil Prod. Co.	2	45
Atlantic Oil Producing Co.	1	35
Simms Oil Company	3	35
McMan Oil & Gas Company	2	30
Texon Oil & Land Company	1	15
White Eagle Oil & Refining Co.	1	5
Totals	287	18,490

REAGAN COUNTY

Big Lake Oil Company	122	16,370
Texon Oil & Land Co.	79	6,940
Totals	201	23,310

PECOS COUNTY

Mid-Kansas & Transcontinental Oil Co.	27	*18,285
The California Company	9	*7,270
Gulf Production Company	4	*6,510
Gulf Prod. Co. (Crockett County)	2	*355
Simms Oil Company	3	*5,195
McMan O&G Co. & Marland Oil Co.	11	*3,485
Humble Oil & Refining Co.	4	*2,235
Marland Oil Company	8	*1,785
Roxana Petroleum Corp.	5	*1,550
Crude Oil Co. (was Allsman-Bell)	3	*325
Red Bank Oil Company	2	*245
Mazda Oil Corp. & Savoy Oil Co.	1	*165
Kirby Pet. Co. & Edson Pet. Co.	1	*50
Totals	80	47,455

WINKLER COUNTY

	Producing Wells	Daily Average Prod.
Cranfill-Reynolds et al	2	7,075
Landreth Prod. Corp. & Roxana Pet. Corp.	4	*6,355
Southern Crude & R. A. Westbrook et al	3	6,200
Gulf Production Company	4	*5,955
Roxana Petroleum Corporation	2	*5,725
Humble Oil & Refining Co.	2	*5,045
Southern Crude & Dixie Oil Co.	6	*4,245
Independent Oil & Gas Company	3	*3,400
Atlantic Oil Producing Co.	2	*2,375
Magnolia Petroleum Co.	1	2,010
Texon Oil & Land Company	1	1,310
Murchison Oil Co. & Cranfill Bros.	5	1,155
The Texas Co. (was Pure Oil Co.)	1	*490
Joe Maxwell & L. C. Turman	1	*75
Llano Oil Co. & Roxana Pet. Corp.	1	20
Totals	38	51,435

HOWARD COUNTY

Magnolia Petroleum Company	40	3,860
Marland Oil Company	32	1,090
Pure Oil Company	4	305
Lockhart & Company	7	135
Sweeney & Henry et al	1	105
F-H-E Oil Company	2	110
Bristow & Merrick	3	90
Godley Oil & Gas Company	1	85
Frank M. Greene Corp.	2	75
Mid-West Exploration Company	2	50
L. C. Harrison et al	2	45
Tidal Oil Company	2	45
Humble Oil & Refining Company	2	30
Owen-Sloan Oil Company	1	30
Comet Petroleum Company	2	25
Marland Oil Co. & Texon Oil & Land Co.	1	25
Gulf Production Company	2	10
Totals	106	6,115

MITCHELL COUNTY

The California Company	96	2,435
Magnolia Petroleum Company	22	525
Atlantic Oil Producing Co.	8	205
Eastland Oil Company et al	9	175
Tidal Oil Company	2	30
Fred Carey et al	1	20
Totals	138	3,390

JONES COUNTY

Phillips Petroleum Company	11	880
Marland Oil Company	3	355
Mid-West Exploration Company	4	150
Stebbins Oil & Gasoline Co.	1	15
Atlantic Oil Prod. Co. et al	1	5
Totals	20	1,405

CROCKETT COUNTY

Humble O. & R. Co. & Marland Oil Co.	13	810
Cushing Ref. & Gasoline Co.	2	405
Taylor-Link Oil Co. & Kirby Pet. Co.	1	305
E. L. Smith Oil Co. (was J. K. Hughes)	5	235
Pecos Oil Company (was Cromwell)	3	160
Republic Production Co.	2	135
Gulf Production Company	6	105
Roxana Petroleum Corp.	1	15
Totals	33	2,170

RUNNELS COUNTY

Vacuum Oil Co. & Hill-Ladd	1	85

LOVING COUNTY

Lockhart & Company et al	2	70

SCURRY COUNTY

The Northwest Company	5	50

ECTOR COUNTY

J. S. Cosden & The Texas Co.	1	15
Totals for all fields	1,156	257,620

*Production partially pinched.

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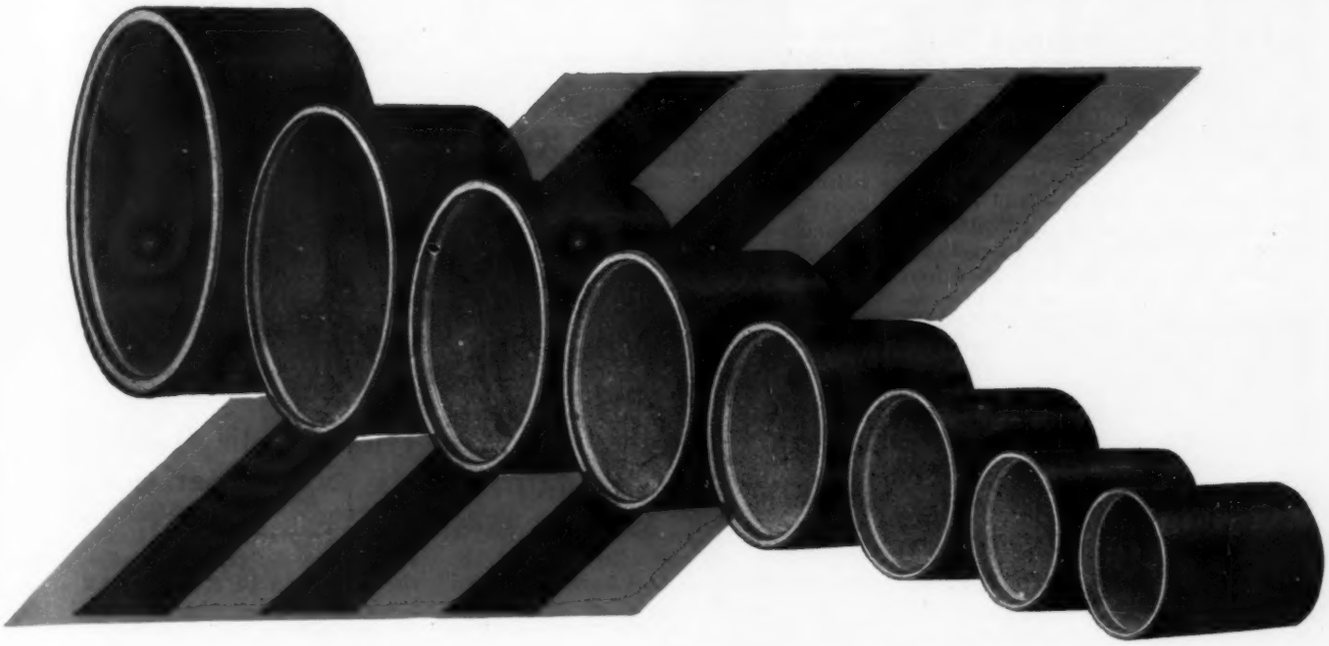

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Mountain States Field Development Notes

LaBarge Operations Shut Down for Winter

Kemmerer, Wyo.—Operations in the LaBarge district are slowing up for the winter, as in all other districts in the State. Rainbow Oil Company last week announced that it would drill no more tests until spring. California Petroleum Corporation, the largest operator in the field, has completed four wells and has announced no new locations for the season. Several of the officials and superintendents have left Wyoming for California where they will remain for the winter. Fifteen or 16 wells beside those of the California Petroleum Corporation are continuing operations.

Texas Production Company is testing its well on nw 36-27-113, getting about 250 barrels of fluid of which only 35 barrels is oil.

Midwest Refining Company and its subsidiary, the Utah Oil Refining Company, are conducting a 30-day test run of the production in the LaBarge field. Upon the results of this run will depend the proposed pipe line from the field to Salt Lake City, where the Utah company has its refinery. Utah Oil Refining Company has a franchise for laying the line, having acquired it from the California Petroleum Corporation, which, in turn, had acquired it from the Beneficial Oil Company along with that company's properties in the field. That the line may be started before spring is the belief of many in the field. It is said that California Petroleum Corporation has its last 80,000-barrel storage tank more than half filled, and that this company's urgency has been responsible for the making of the test run.

W. D. Newlon reports that he has a showing of oil at 1533 feet in his wildcat test east of the field. Location is on 12-26-113, and should a producer materialize, will extend the field two miles to the east.

Consolidated LaBarge Oil Company has spudded in its test on 8-25n-113w.

Bannatyne Area Not So Large as Thought

Great Falls, Mont.—Six dry holes have been completed to date in the Bannatyne oil area in the Sweet Grass Arch territory, about 45 miles north of this city, and it now seems that the possible producing limits of the field have been narrowed from several thousand acres to three or four sections. Accurate production figures of the discovery wells are no longer available, and this, coupled with the recent failures, has added much to the scepticism concerning the field. The first plan of development—to secure cheap acreage and work in toward the proven area—has been abandoned and from henceforth all development will be carried on from the discovery wells outward.

Bannatyne Oil Company will abandon its Eckelman 1, on 29-26-1e, at 1635 feet. It had a showing in the Sunburst and again in the Emerick, neither of which was commercial. Fidelity Oil Company will abandon its Bannatyne 1, 15-25-1e, at 1340 feet. There was water in the Sunburst.

W. J. Elliott and C. E. Crocker will drill a test southwest of Bannatyne in 2-24-1w, within a mile of the town of Dutton. A large block of leases has been secured and drilling will be started as soon as materials are on the ground.

Start Wildcatting

Cheyenne, Wyo.—Announcement is made here to the effect that J. F. Meeker and associates have completed leasing and financing necessary for their test of a wildcat structure five and one-half miles northeast of the city. Within the next few weeks those interested plan a campaign of "pitting" to determine the closure of the structure. Test is to be drilled in the spring.

Iles Dome Deal

Craig, Colo.—Several major companies are said to be dealing for the east flank acreage on Iles Dome of the Iles Investment Company. This tract was formerly leased to the Yarg interests who have surrendered it to the original owners. Completion of the Midwest Refining Company's producers on this acreage recently have enhanced the value of the holdings.

Las Animas County

Denver, Colo. — Reiter-Foster Oil Corporation has spotted its locations on 23-29-56, Las Animas County, Red Rocks structure for the joint test it will drill with the Phillips Petroleum Company and Texas Production Company. The last named will share on a contribution basis. Material is being moved in and drilling will be under way as soon as possible. The operation will be of great interest inasmuch as it, with the Parker Club's well and the tests at Timpas Dome, will do much to prove up the potentialities of the southeastern part of the State.

Cheyenne, Wyo.—Reported sale of the Salt Creek State oil contract of the Producers & Refiners Corporation to the White Eagle Oil & Refining Company will not be completed until the approval of the state land board is received. This meeting will not convene until the return to Cheyenne from Washington of Governor Emerson.

Appropriation Made for Shale Experiments

Denver, Colo.—Specific appropriation items calling for the expenditure of $80,000 to be used in the development of Colorado shale oil, and an item for $198,260 for oil, gas and shale investigations, will be in the budget to be transmitted to the Seventieth Congress by President Coolidge. Citizens and officials of the State who have interested themselves in the development of the oil industry there have been responsible for the inclusion of these items.

Thermopolis Refinery to Start Operations

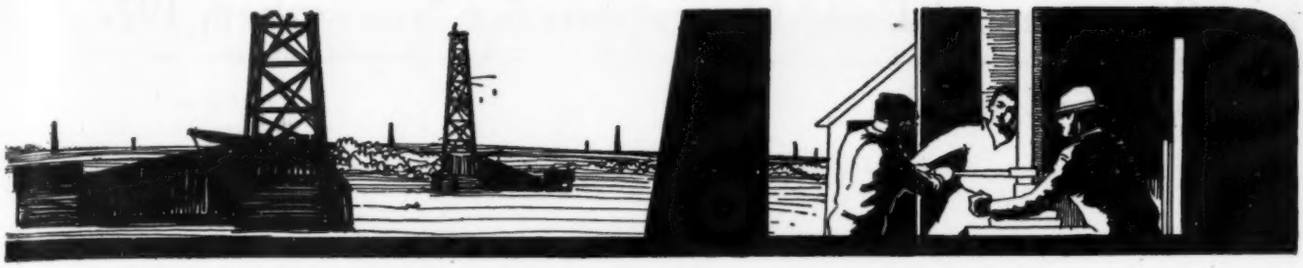
Thermopolis, Wyo.—Gasoline refining will be started at the local refinery as soon as delivery from the field of the crude can be effected. All of the production from the Torchlight and Warm Springs fields will be refined at the Thermopolis plant. The Torchlight field has but recently been reopened, after having been shut down for a considerable time. The refinery was recently purchased by the J. H. Walden interests of Chicago, and for the last few months has been going through a process of improvement and reconditioning. Pipe line to Basin is repaired and installation of new booster pumps in the Warm Springs field is the only thing which is now delaying the delivery of crude to the plant.

Work Starts on Pipe Line From Iles Dome

Craig, Colo. — Midwest Refining Company and Texas Production Company's pipe lines from the Iles Dome field to Craig have already been started. The Midwest line will be unique in that it will be the first long transportation project which will use victaulic couplings. The pipe has no threads, but is grooved and has a rubber gasket which is clamped into place between the points. This newly invented device is said to give a line free from leaks and to care for natural expansion without showing flaws. Use of this new type of line will be watched by the entire industry with a great deal of interest.

Midwest's civil engineers are in charge of the construction of the 55,000-barrel steel storage tank and the laying of a spur track at Craig. A pump station will also be built. Electric equipment will be used for pumping at this station which, with the one at Iles, will be the only units in the line.

Texas Production Company has completed securing its right-of-way for its extension line to Craig refinery. No contract has been let for the ditching but this will be done soon.



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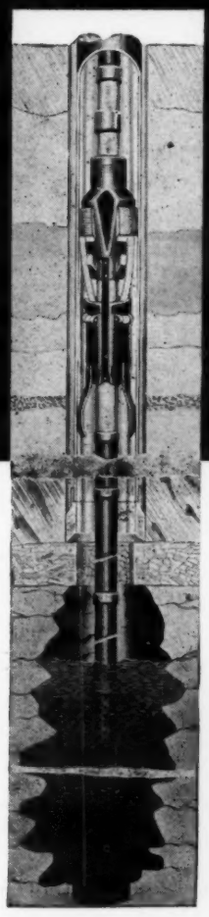

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Summary of Field Operations for November, 1927

EASTERN STATES

	Completions	Producers	Gas Wells	Failures	Initial Prod
Pennsylvania	120	101	15	4	360
New York	30	27	2	1	101
Tennessee	12	10	1	1	740
Mississippi	1	..	..	1	...
Florida	2	..	..	2	...
West Virginia	59	13	33	13	91
Kentucky	105	59	4	42	2,555
Illinois	14	5	..	9	118
Ohio	107	47	39	21	1,205
Indiana	26	10	2	8	349
Michigan	26	18	..	15	230
Totals	563	293	96	117	5,749

PENNSYLVANIA

Bradford	76	76	..	..	304
Center-Middle	3	3	..	..	6
Venango	14	14	..	..	31
Greene	10	..	9	1	...
Butler	7	4	1	2	10
Clarion	7	2	4	1	5
Beaver	2	1	1	..	2
Washington	1	1	..	..	2
Totals	120	101	15	4	360

NEW YORK

Allegany	30	27	2	1	101

TENNESSEE

Clay	8	7	1	..	670
Jackson	2	2	..	..	50
Overton	2	1	..	1	20
Totals	12	10	1	1	740

MISSISSIPPI

Monroe	1	..	..	1	...

FLORIDA

Polk	1	..	..	1	...
Manatee	1	..	..	1	...
Totals	2	..	..	2	...

WEST VIRGINIA

Putnam	3	..	3	..	...
Mingo	1	..	1	..	...
Lewis	1	..	1	..	...
Ritchie	5	2	1	2	14
Pleasants	9	4	..	5	15
Wood	4	3	..	1	7
Calhoun	10	..	8	2	...
Doddridge	5	..	4	1	...
Taylor	1	..	1	..	...
Roane	2	..	2	..	...
Boone	3	..	3	..	...
Wirt	1	1	..	..	2
Harrison	3	..	3	..	...
Marion	1	..	1	..	...
Marshall	2	..	1	1	...
Clay	2	2	..	..	50
Tyler	1	1	..	..	3
Gilmer	2	..	2	..	...
Braxton	1	..	..	1	...
Wetzel	1	..	1	..	...
Monongalia	1	..	1	..	...
Totals	59	13	33	13	91

KENTUCKY

Floyd	3	..	3	..	...
Johnson-Magoffin	6	5	..	1	44
Estill	12	11	..	1	30
Wayne	2	..	..	2	...
Warren	5	2	..	3	22
Allen	9	3	..	6	13
Barren	16	9	..	7	118
Clinton	1	1	..	..	100
Ohio	44	23	..	21	2,058
McLean	1	1	..	..	110
Daviess	5	4	..	1	60
Clay	1	..	1	..	...
Totals	105	59	4	42	2,555

ILLINOIS

Lawrence	2	1	..	1	35
Wabash	5	2	..	3	50
Clark	4	1	..	3	18
McDonough	1	..	..	1	...
Crawford	2	1	..	1	15
Totals	14	5	..	9	118

SOUTHEASTERN OHIO

Washington	5	..	..	5	...
Morgan	2	..	1	1	...
Noble	1	1	..	..	2

CENTRAL OHIO

Coshocton	5	2	3	..	9
Cuyahoga	13	..	12	1	...
Ashland	5	..	5	..	...
Medina	6	3	2	1	4
Holmes	7	1	3	3	50
Hocking	6	2	..	4	131
Wayne	1	..	1	..	...
Knox	3	..	3	..	...
Licking	7	6	1	..	159
Perry	6	3	1	2	145
Guernsey	3	3	..	..	225
Meigs	1	..	1	..	...
Muskingum	2	1	1	..	65
Lorain	2	..	2	..	...
Ashland	2	..	1	1	...
Columbiana	1	1	..	..	...
Athens	3	1	2	..	5

NORTHWESTERN OHIO

Hancock	5	5	..	..	115
Allen	3	3	..	..	69
Sandusky	2	2	..	..	18
Auglaize	9	8	..	1	148
Hardin	1	1	..	..	8
Darke	1	1	..	..	3
Ottawa	1	..	..	1	...
Mercer	3	3	..	..	46
Van Wert	1	..	..	1	...
Totals	107	47	39	21	1,205

INDIANA

Gibson	6	3	1	2	87
Davies	2	..	..	2	...
Vigo	3	3	..	..	215
Pike	3	1	1	1	5
Sullivan	1	..	..	1	...
Jay	3	2	..	1	39
Adams	2	1	..	1	3
Totals	20	10	2	8	349

MICHIGAN

Saginaw	21	17	..	4	225
Van Buren	1	1	..	..	5
Gratiot	3	..	..	3	...
Shiawassee	3	..	..	3	...
Mason	1	..	..	1	...
Newago	1	..	..	1	...
Muskegon	1	..	..	1	...
Iosco	1	..	..	1	...
Wayne	1	..	..	1	...
Totals	33	18	..	15	230

MOUNTAIN STATES

Wyoming	6	5	1	..	2,283
Montana	12	9	2	1	13,117
Colorado	3	3	..	..	449
Totals	21	17	3	1	15,849

WYOMING

Big Muddy	1	1	..	..	100
Hiawatha Dome	1	..	1	..	...
La Barge	1	1	..	..	25
Salt Creek	3	3	..	..	2,158
Totals	6	5	1	..	2,283

COLORADO

Florence	3	3	..	..	449

MONTANA

Kevin-Sunburst	12	9	2	1	13,117

KANSAS

Butler	2	2	..	..	325
Chase	2	..	..	2	...
Coffey	1	1	..	..	20
Cowley	11	2	4	5	515
Dickinson	1	..	..	1	...
Elk	4	3	1	..	190
Greenwood	41	23	1	17	3,955
Marion	2	..	..	2	...
McPherson	1	..	1	..	...
Morris	2	..	1	1	...
Reno	2	..	..	2	...
Russell	3	2	..	1	175
Saline	1	..	..	1	...
Sumner	36	20	1	15	8,245
Wabunsee	1	..	..	1	...
Woodson	1	..	..	1	...
Totals	111	53	9	49	13,425

OKLAHOMA

Beckham	1	..	1	..	...
Carter	13	8	..	5	817
Creek	39	19	6	14	2,300
Garfield	6	4	..	2	2,500
Grady	24	7	8	9	557
Jefferson	3	1	..	2	20
Kay	17	4	5	8	160
Kingfisher	1	..	..	1	...
Lincoln	5	1	..	4	570
Logan	2	..	1	1	...
McIntosh	5	..	1	4	...
Muskogee	14	4	2	8	235
Okmulgee	26	10	9	7	438
Okfuskee	9	3	4	2	3,238
Osage	24	12	6	6	4,891
Pawnee	2	2	..	..	80
Payne	2	..	1	1	...
Pontotoc	15	9	2	4	5,777
Pottawatomie	31	22	1	8	7,465
Seminole	169	120	1	48	95,870
Stephens	14	5	1	8	375
Tillman	1	..	..	1	...
Tulsa	11	6	2	3	143
Wagoner	6	..	..	6	...
Totals	440	237	51	152	125,436

KANSAS PRODUCTION

Field	Barrels
Greenwood	970,450
Florence-Covert	45,000
Peabody-Elbing	116,400
Eldorado-Towanda	428,100
Augusta Fox-Bush	127,150
Rainbow Bend	68,000
Russell	76,000
Churchill	408,750
Others	960,400
Totals	3,200,250

OKLAHOMA PRODUCTION

Field	Barrels
North Braman	87,200
South Braman	63,950
Blackwell	117,000
Hubbard	100,300
Thomas	64,900
Tonkawa	499,950
Garber	301,600
Burbank	1,154,900
Osage	913,100
Watchorn	49,900
Cushing	637,200
Yale-Jennings	285,950
Davenport	80,500
Bristow-Slick	747,750
North Okmulgee	485,800
Lyons-Deaner	189,850
Stroud	37,500
Cromwell	332,700
Papoose	178,550
Wewoka	346,650
Seminole	1,824,200
Bowlegs	3,805,750
Searight	792,300
Little River	1,307,300
Earlsboro	4,922,600
Duncan	204,000
Graham	194,100
Fox	57,900
Healdton	442,200
Hewitt	279,900
Scholem Alechem	381,000
Others	2,118,950
Total	23,005,450

ARKANSAS

El Dorado	..	..	..	..	..	....	181,250
Lisbon	..	..	..	..	..	....	82,700
Nevada	5	5	..	..	400	108,600	
Smackover	6	4	2	..	403	2,522,600	
Stephens	..	..	..	..	..	....	36,000
Others	..	..	..	..	..	....	3,000
Wildcats	10	..	..	10	....	.....	
Totals	21	9	2	10	803	2,934,150	

CLARK CLUTCH HANDLES HEAVIEST BELT STRAINS

Note the long, heavy belt in the photograph—BUT note also the powerful pedestal bearing which carries the belt pulley of the CLARK Drilling Engine. This powerful construction absolutely protects the engine crankshaft from side pull.

The CLARK was the first successful gas drilling engine, and its clutch is the result of 5 years of careful development and costs 4 to 7 times as much as any other drilling engine clutch. The pulley and clutches are carried on a hollow shaft, within which the clutch shaft is *full floating*.

Rush and Mount are operating 4 CLARKS in the Crane County, Texas, district. This one is on the Sims lease. G. E. Seals and C. L. Flock, shown at right, said this CLARK is now on its 5th well and still going as strong as ever.

Clark Bros. Co. OLEAN, N. Y.

CLARK BROS. COMPANY

OLEAN, NEW YORK

Mid-Continent Branch and Warehouse: 125 W. First St., Tulsa

Other warehouses at McCamey and Sweetwater, Texas, and Artesia, New Mexico

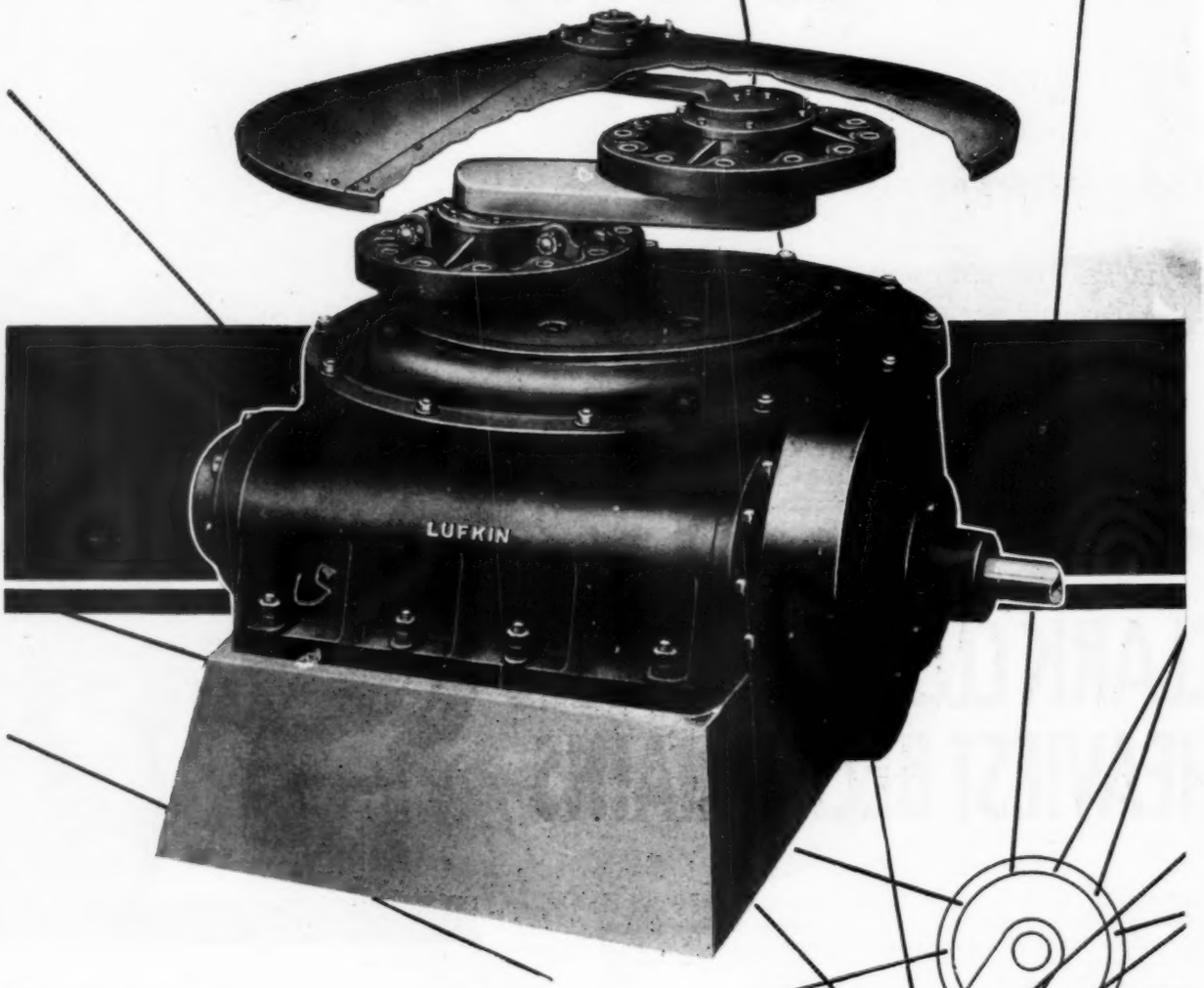
SMITH, BOOTH, USHER COMPANY

228 S. Central Ave., Los Angeles, 50 Fremont St., San Francisco

CLARK

Say you saw it in The OIL WEEKLY

LUFKIN
POWER



Lufkin worm geared power does away with belts and practically eliminates shut down time.

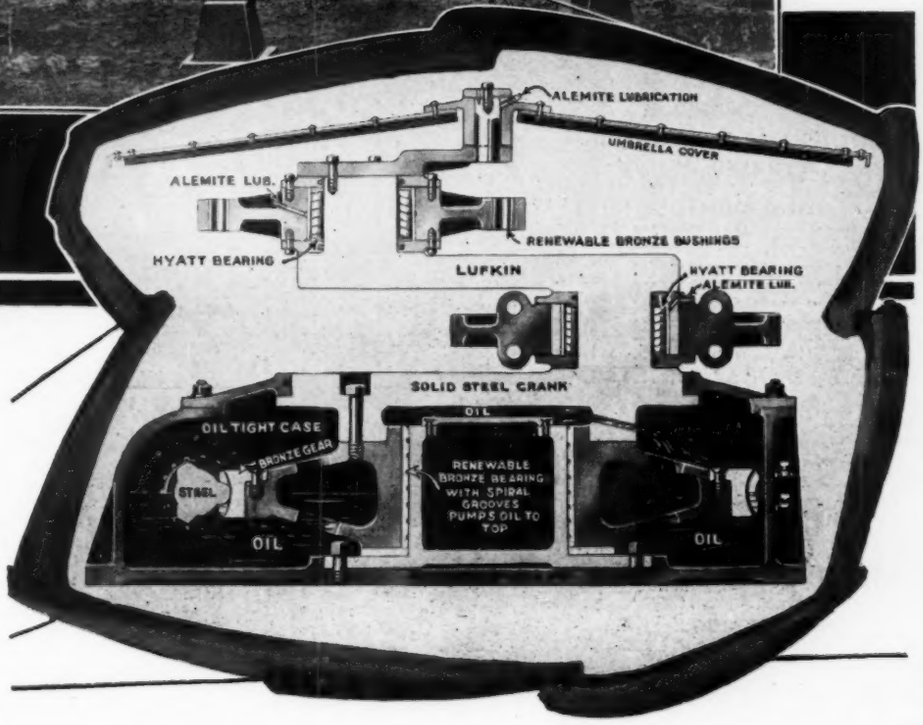
Manufactured at Lufkin, Texas
By
THE LUFKIN FOUNDRY AND MACHINE CO.

DISTRICT OFFICES:
LOS ANGELES TULSA NEW YORK HOUSTON

WAREHOUSES:
SEMINOLE, OKLAHOMA ODESSA, TEXAS EL DORADO, ARKANSAS

Say you saw it in The OIL WEEKLY

LUFKIN POWER



Lufkin worm geared power is weather-proof and does not need to be housed. The installation cost is a minor item.

Note the crank is equipped with Hyatt roller bearings —worm gear runs in oil.

Manufactured at Lufkin, Texas
By
THE LUFKIN FOUNDRY AND MACHINE CO.

DISTRICT OFFICES:

LOS ANGELES TULSA NEW YORK HOUSTON

WAREHOUSES:

SEMINOLE, OKLAHOMA ODESSA, TEXAS EL DORADO, ARKANSAS

CALIFORNIA PRODUCTION

Field	Barrels
Santa Fe Springs	1,168,000
Long Beach	3,107,500
Huntington Beach	1,839,000
Torrance	600,000
Dominguez	438,200
Rosecrans	259,800
Inglewood	966,000
Midway-Sunset	2,493,000
Ventura Avenue	1,580,800
Seal Beach	1,475,000
Others	4,788,000
Totals	18,715,300

CALIFORNIA

	Completions	Producers	Gas Wells	Failures	Prod Initial
Athens-Rosecrans	1	1	..	..	25
Baldwin Hills—					
Inglewood	1	1	..	..	170
Brea-Olinda	2	1	..	1	325
East Coyote	1	1	..	..	110
Goleta	2	..	..	2	...
Huntington Beach	9	9	..	..	2,705
Kern Front	11	11	..	..	2,090
Long Beach	5	5	..	..	17,800
Midway	3	3	..	..	380
Richfield	1	1	..	..	900
Santa Fe Springs	1	1	..	..	50
Seal Beach	20	12	..	8	5,650
Sunset	1	1	..	..	50
Ventura	1	1	..	..	500
Wildcats	7	..	..	7	...
Totals	66	48	..	18	30,755

MOUNTAIN STATES

WYOMING

Field	Barrels
Salt Creek	1,076,800
Grass Creek	78,650
Elk Basin	30,700
Big Muddy	84,000
Lost Soldier	78,750
Rock River	79,550
Lance Creek	35,900
Teapot Dome	12,450
Others	111,100
Total	1,587,900

MONTANA

Cat Creek	57,950
Sunburst	339,500
Others	6,400
Totals	403,850

COLORADO

Moffats (Craig)	39,400
Florence	26,350
Fort Collins	86,450
Others	40,450
Totals	192,650

NEW MEXICO

Artesia	37,700
Hogback	16,150
Rattlesnake	8,650
Others	3,000
Totals	65,500

LOUISIANA

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod
Bellevue	..	..	..	..	....	32,250
Bossier Parish	5	1	4	..	20	.....
Caddo Parish	16	11	5	..	2,500	504,700
Cotton Valley	..	..	..	..	....	153,050
De Soto-Red River	4	3	..	1	77	121,700
Elm Grove	..	..	..	..	....	20,000
Haynesville	..	..	..	..	....	209,500
Homer	..	..	..	..	....	140,700
La Salle Parish	1	1	..	..	75	.....
Morehouse Parish	1	..	1	..	....	.....
Monroe	..	..	..	..	....	.....
Ouachita Parish	1	..	1	..	....	.....
Pleasant Hill	..	..	..	..	....	27,900
Richland Par.	2	..	2	..	....	.....
Sabine Parish	3	3	..	..	1,375	.....
Spring Hill	..	..	..	..	....	.....
Union Parish	..	..	..	..	....	.....
Urania	..	..	..	..	....	272,850
Webster Par.	3	2	1	..	40	.....
Wildcats	33	2	..	31	2,440	.....
Totals	69	23	14	32	6,527	1,482,650
La. Gulf Coast	16	11	1	4	4,065	467,350
La. Totals.	85	34	15	36	10,592	1,950,000

LOUISIANA GULF COAST

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
Edgerly	6	5	1	..	2,190	67,950
Evangeline	3	1	..	2	45	39,450
Lockport	2	1	..	1	420	172,800
Vinton	5	4	..	1	1,410	143,900
Others	..	..	..	..	....	43,250
Wildcats	..	..	..	..	....	.....
Totals	16	11	1	4	4,065	467,350

TEXAS

North Texas	131	64	3	64	5,756	2,718,800
Central and W. Texas	185	100	11	74	146,149	8,174,600
East Texas	13	1	4	8	37	.....
East Central Texas	..	..	..	..	....	848,350
Southwest Texas	13	7	3	3	356	778,600
Texas Panhandle	20	8	7	5	1,100	2,532,250
Gulf Coast	45	33	1	11	11,650	3,674,100
Totals	407	213	29	165	165,048	18,726,700

TEXAS GULF COAST

Barbers Hill	1	1	..	..	100	57,700
Batson	3	3	..	..	28	38,800
Big Creek	..	..	..	..	....	88,200
Blue Ridge	7	6	..	1	4,019	131,000
Boling	..	..	..	..	....	72,850
Damon Md.	..	..	..	..	....	26,550
Goose Creek	4	3	..	1	68	232,750
High Island	..	..	..	..	....	.....*
Hull	4	4	..	..	199	443,950
Humble	..	..	..	..	....	56,800
Nash Dome	1	..	..	1	....	.....*
Orange	3	2	..	1	85	126,000
Orchard	..	..	..	..	....	.....*
Pierce Jct.	4	4	..	..	4,327	349,900
Saratoga	3	2	..	1	25	30,350
Sour Lake	1	1	..	..	15	118,050
South Liberty	..	..	..	..	....	71,800
Spindle Top	7	6	..	1	2,674	1,488,550
W. Columbia	..	..	..	..	....	271,100
Others	..	..	..	..	....	69,750
Wildcats	7	1	1	5	50	.....
Totals	45	33	1	11	11,650	3,674,100

(*) Production included in "Others".

TEXAS PANHANDLE

Carson Co.	5	2	3	..	....a	234,250
Gray County	3	1	2	..	900b	459,000
Hartley Co.	1	..	..	1	....	.....
Hutchinson County	7	4	..	3	170	1,798,450
Potter Co.	1	..	1	..	c	.....
Wheeler Co.	3	1	1	1	30d	37,850
Others	..	..	..	..	....	2,700
Totals	20	8	7	5	1,100	2,532,250

(a) Includes 122 million feet gas.
(b) Includes 1½ million feet gas.
(c) Includes 50 million feet gas.
(d) Includes 19 million feet gas.

SOUTHWEST TEXAS

Dale	3	3	..	..	176	12,350
Duval Co.	..	..	..	..	....	c
Kleberg Co.	..	..	..	..	....	c
Laredo Dist.	1	1	..	..	35	239,450
Luling	..	..	..	..	....	443,450
Lytton Spgs.	..	..	..	..	....	45,850
Medina Co.	..	..	..	..	....	c
San Patricio County	2	..	2	..	....a	.....
Somerset	..	..	..	..	....	25,500
Zapata Co.	2	..	1	1	....b	.....
Others	..	..	..	..	....	12,000
Wildcats	5	3	..	2	145	.....
Totals	13	7	3	3	356	778,600

(a) Includes 80 million feet gas.
(b) Includes 10 million feet gas.
(c) Production included in "Others".

EAST TEXAS

Harrison Co.	3	..	3	..	....b	.....
Panola Co.	2	1	1	..	37a	.....
Wildcats	8	..	..	8	....	.....
Totals	13	1	4	8	37	.....

(b) 12½ million feet gas.
(a) Includes 3 million feet gas.

EAST CENTRAL TEXAS

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod
Corsicana Powell	..	..	..	..	....	403,750
Currie	..	..	..	..	....	18,000
Mexia	..	..	..	..	....	258,500
Nigger Creek & Cedar Ck.	..	..	..	..	....	72,550
Richland	..	..	..	..	....	20,800
Wortham	..	..	..	..	....	74,750
Wildcats	..	..	..	..	....	.....
Totals	..	..	..	..	....	848,350

CENTRAL AND WEST TEXAS

Big Lake	1	1	..	..	45	688,700
Brown Co.	48	32	1	15	6,467c	574,000
Callahan Co.	18	6	1	11	247e	118,400
Coleman Co.	7	..	1	6	....g	37,150
Comanche Co.	1	..	..	1	....	.....
Crane Co.	10	10	..	..	7,645	3,780,400
Crockett Co.	1	1	..	..	40	77,350
Eastland Co.	19	7	4	8	1,035d	249,200
Howard Co.	9	8	1	..	2,600a	130,200
Jones Co.	..	..	..	..	....	49,400
McCulloch Co.	1	..	..	1	....	.....
Mitchell Co.	..	..	..	..	....	103,250
Palo Pinto Co.	2	..	..	2	....	15,000
Pecos Co.	19	19	..	..	106,545	1,176,750
Shackelford	6	2	..	4	25	157,700
Stephens Co.	7	3	2	2	70f	239,550
Upton	2	2	..	..	725	.....*
Winkler Co.	11	8	1	2	20,665b	698,050
Others	..	..	..	..	....	79,500
Wildcats	23	1	..	22	40	.....
Totals	185	100	11	74	146,149	8,174,600

*Production included under Crane.
(a) Includes 3½ million ft gas.
(b) Includes 75 million feet gas.
(c) Includes 2¾ million feet gas.
(d) Includes 11¼ million feet gas.
(e) Includes 2 million feet gas.
(f) Includes 4½ million feet gas.
(g) Includes 1¼ million feet gas.

NORTH TEXAS

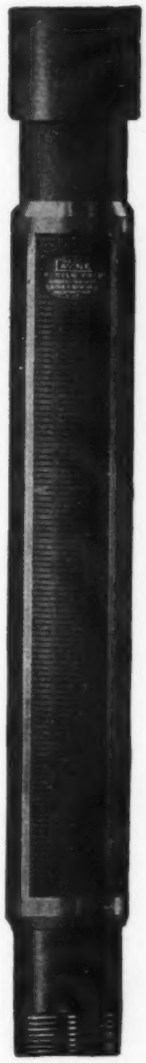
Archer Co.	25	7	..	18	187	707,600
Baylor Co.	2	..	..	2	....	3,000
Burkburnett	4	1	..	3	40	372,400
Clay County-Petrolia	..	..	..	..	....	17,750
Cooke Co.	11	7	..	4	245	c
Electra	7	5	..	2	200	366,650
Grayson Co.	2	..	1	1	....b	.....
Jack Co.	23	11	1	11	415	24,600
K-M-A and Iowa Park	9	5	..	4	204	60,000
Knox Co.	1	..	..	1	....	.....
Montague Co.	14	10	1	3	370a	483,700
South Vernon District	9	6	..	3	620	339,250
Throckmorton County	3	1	..	2	15	38,900
Young Co.	20	11	..	9	3,460	289,950
Wise County	1	..	..	1	....	.....
Others	..	..	..	..	....	15,000
Wildcats	..	..	..	..	....	.....
Totals	131	64	3	64	5,756	2,718,800

(a) Includes 20 million feet gas.
(b) Includes 2 million feet gas.
(c) Production included under Montague.

Dan Mahoney, veteran scout for Sinclair Oil & Gas Company, has been transferred to North Texas to take charge of Sinclair's scouting work there, headquarters at Fort Worth. He was in Tulsa Tuesday of last week, having arrived from California, where he has been most recently stationed. He was moved some time ago to the Rocky Mountain territory from the Mid-Continent, and thence to California.

Like a Duck Takes to Water—

is the way the oil industry is taking to this new improved Layne Screen with its Greater Screening Inlet



View of Complete Layne Screen

Section of Layne Keystone Wire Wrapped Screen, showing the new ***Milled*** Groove Holes, that provide ***double*** the screening inlet.

—Plant working night and day.

—Words of praise from every user of this improved screen.

—Many actual instances of greatly increased production.

—Plenty of statements that NO OTHER screen will be used, etc.

These are the results of our announcement two weeks ago on the perfection of this new type of Layne screen—AND NOT ONE CRITICISM.

But our 25 years of screen experience is built into Layne screens. The Trade naturally expects our products to have merit.

The Layne & Bowler Co.

VICKERS, LIMITED
London, England

HOUSTON, TEXAS

THE LAYNE & BOWLER CORP.
Los Angeles, Calif.

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1926	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Ave.	United States Total
January	445,950	99,600	256,500	90,100	43,800	178,000	100,450	101,700	618,750	1,934,850	59,979,900
February	450,300	102,050	246,600	91,550	45,300	169,400	98,950	101,050	604,950	1,910,150	53,483,900
March	457,900	103,000	260,500	91,950	48,800	165,700	97,800	102,100	604,400	1,932,150	59,897,250
April	464,850	102,600	265,600	90,900	51,550	170,750	101,750	107,300	600,650	1,955,950	58,678,000
May	463,350	106,150	280,050	93,700	59,100	175,700	106,100	111,650	602,400	1,998,200	61,944,950
June	459,100	107,900	305,100	91,350	60,350	166,950	106,050	113,300	607,550	2,017,650	60,529,350
July	456,700	110,450	336,300	116,550	57,100	161,650	104,650	107,750	614,400	2,065,550	64,032,300
August	465,300	111,750	383,800	162,800	56,800	157,350	108,600	110,600	608,900	2,165,900	67,143,450
September	466,050	113,400	403,750	175,200	56,850	153,250	110,200	104,700	598,150	2,181,550	65,446,500
October	503,350	114,650	444,700	169,900	58,200	149,500	109,450	98,500	614,200	2,262,450	70,136,500
November	550,700	115,800	477,000	176,900	56,450	143,700	111,150	92,900	643,650	2,368,250	71,047,550
December	564,250	118,800	480,800	181,900	54,800	138,600	110,050	85,650	660,400	2,395,250	74,252,700
1927											
January	598,500	117,200	466,400	173,900	52,900	131,550	107,850	84,450	653,450	2,386,200	73,972,150
February	693,350	116,250	479,800	154,600	52,800	128,200	107,150	85,300	642,700	2,460,150	68,884,300
March	710,350	116,100	475,000	154,750	51,450	124,500	104,400	87,600	640,850	2,465,000	76,414,900
April	723,700	115,400	477,300	155,100	50,500	113,350	108,000	89,350	644,550	2,477,250	74,317,750
May	742,200	114,600	488,700	151,300	47,450	112,700	114,000	89,300	633,550	2,493,800	77,307,700
June	768,600	112,200	480,800	151,650	49,150	112,450	111,850	86,050	638,550	2,511,300	75,338,900
July	846,750	107,750	475,800	142,950	56,200	109,900	111,800	86,950	620,700	2,558,800	79,322,300
August	832,900	105,100	483,450	139,350	56,950	104,750	114,600	80,750	621,450	2,539,300	78,717,850
September	797,450	105,200	493,750	142,900	53,450	101,350	110,800	74,500	637,250	2,516,650	75,498,900
October	782,300	105,100	497,900	138,400	51,300	100,450	113,600	73,250	629,000	2,491,300	77,230,000
November	766,900	106,650	501,750	138,100	49,400	97,850	114,900	75,050	623,850	2,474,450	74,233,500
December 3	766,000	106,300	507,300	135,850	48,000	96,650	113,750	79,550	626,400	2,480,750	17,365,250
December 10	736,200	106,050	546,500	141,150	47,650	96,100	112,000	74,450	627,400	2,487,500	17,412,500
Increase	.....	.....	39,200	5,300	.....	.....	.....	.....	1,000	6,750	47,250
Decrease	29,800	250	.....	.....	350	550	1,750	5,100	.....	.....	.....

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	Dec. 10	Dec. 3
Hutchinson County	57,800	57,900
Gray County	19,300	17,900
Carson County	8,100	8,150
Wheeler County	1,250	1,400
Others	50	200
Totals	86,500	85,550

NORTH TEXAS

Burkburnett	12,000	12,250
Electra	11,950	12,050
Iowa Park-KMA	1,900	2,000
Wilbarger	11,400	11,650
Archer County	23,500	23,900
Clay County (Petrolia)	600	600
Baylor County	100	100
Montague and Cooke Cos.	15,750	15,900
Totals	77,200	78,450

WEST CENTRAL TEXAS

Stephens County	7,900	7,850
Eastland-Desdemona	8,650	8,100
Brown County	18,000	18,850
Coleman County	1,150	1,350
Callahan County	4,150	4,200
Shackelford County	5,300	5,450
Young County	9,750	9,500
Throckmorton County	1,300	1,400
Jack County	1,050	800
Palo Pinto County	450	500
Others	400	500
Totals	58,100	58,500

WEST TEXAS

Jones County	1,500	1,750
Mitchell-Scurry Cos.	3,500	3,350
Howard County	6,250	4,400
Reagan County	22,950	23,600
Crane-Upton Counties	127,700	112,100
Crockett County	2,700	2,850
Pecos County	54,200	43,100
Winkler County	50,500	37,300
Others	2,500	2,700
Totals	271,800	231,150

EAST CENTRAL TEXAS

Mexia	8,300	8,350
Currie	550	600
Richland	700	650
Wortham	2,400	2,400
Corsicana-Powell	13,300	13,400
Nigger Creek and Cedar Creek	2,050	2,150
Totals	27,300	27,550

SOUTHWEST TEXAS

Luling	14,500	14,850
Lytton Springs	1,600	1,600
Somerset	850	850
Laredo District	7,850	8,000
Dale	400	400
Others	400	400
Totals	25,600	26,100
T'tl Tex. (Outside Gulf Coast)	546,500	507,300

TEXAS GULF COAST

West Columbia	8,500	8,750
Damon Mound	900	850
Big Creek	2,500	2,750
Boling	2,550	2,200
Blue Ridge	4,000	4,500
Pierce Junction	13,400	13,250
Humble	1,800	1,850
Goose Creek	7,800	7,650
South Liberty	2,300	2,300
Hull	13,950	14,150
Saratoga	1,050	1,000
Batson	1,250	1,250
Sour Lake	3,900	3,950
Spindle Top	55,050	49,500
Orange County	3,900	3,850
Barbers Hill	1,200	950
Others	2,500	2,950
Totals	126,550	121,700
Texas Total	673,050	629,000

OKLAHOMA

North Braman	2,950	2,950
South Braman	2,050	2,100
Blackwell	3,900	3,900
Hubbard	2,850	2,900
Thomas	2,000	2,050
Tonkawa	16,350	16,450
Garber	9,850	9,950
Burbank	37,400	37,250
Osage (outside Burbank)	30,050	30,050
Watchorn	1,500	1,600
Cushing	21,000	21,000
Yale Jennings	9,400	9,500
Davenport	2,550	2,600
Bristow Slick	24,850	24,850
North Okmulgee	16,100	16,150
Lyons Deaner	6,250	6,300
Stroud	1,250	1,250
Cromwell	10,800	10,800
Papoose	5,750	5,850
Wewoka	10,200	10,350
Seminole	55,750	58,450
Bowlegs	118,150	123,700
Searight	23,450	25,300
Little River	38,900	39,650
Earlsboro	159,300	177,100
Duncan District	6,750	6,800
Graham	6,450	6,450
Fox	1,900	1,950
Healdton	14,600	14,700
Hewitt	9,300	9,350
Scholem Alechem	12,300	12,500
Others	72,300	72,150
Totals	736,200	766,000

CALIFORNIA

Santa Fe Springs	38,500	38,500
Long Beach	112,000	108,500
Huntington Beach	62,000	61,500
Torrance	20,000	20,000
Dominguez	14,500	14,500
Rosecrans	9,000	9,800
Inglewood	32,000	32,000
Midway-Sunset	81,000	82,500
Ventura Avenue	51,900	53,100
Seal Beach	46,000	46,000
Others	160,500	160,000
Totals	627,400	626,400

ARKANSAS

El Dorado	6,100	6,100
Smackover Light	9,300	9,450
Smackover Heavy	73,350	73,650
Stephens	1,150	1,200
Nevada	3,450	3,450
Lisbon	2,650	2,700
Others	100	100
Totals	96,100	96,650

KANSAS

	Dec. 10	Dec. 3
Greenwood County	31,300	31,800
Florence-Covert	1,500	1,500
Peabody-Ebling	3,850	3,900
Eldorado-Towanda	14,250	14,250
Augusta-Fox Bush	4,200	4,250
Rainbow Bend	2,200	2,200
Russell	2,250	2,400
Churchill	14,00	13,700
Others	32,500	2,300
Totals	106,050	106,300

NORTH LOUISIANA

Homer	4,600	4,650
Haynesville	6,800	6,950
Caddo Light	12,050	11,950
Caddo Heavy	4,100	4,050
DeSoto-Red River	4,100	4,100
Elm Grove	700	600
Bellevue	1,050	1,050
Cotton Valley	5,000	5,050
Urania	8,500	9,000
Pleasant Hill	750	600
Totals North Louisiana	47,650	48,000

LOUISIANA GULF COAST

Vinton	4,800	4,600
Lockport	5,250	5,750
Evangeline	1,200	1,200
Edgerly	2,100	2,150
Others	1,250	1,400
Total Louisiana Gulf Coast	14,600	15,100
Louisiana Total	62,250	63,100

MOUNTAIN STATES

WYOMING

Salt Creek	36,300	41,250
Grass Creek	2,350	2,550
Elk Basin	1,000	1,050
Big Muddy	2,800	2,800
Lost Soldier	2,550	2,650
Rock River	2,700	2,600
Lance Creek	1,100	1,050
Others	3,500	3,500
Totals	52,300	57,450

MONTANA

Cat Creek	1,900	1,900
Sunburst	11,000	11,000
Others	150	150
Totals	13,050	13,050

COLORADO

Moffats (Craig)	1,200	1,300
Fort Collins	2,650	2,850
Florence	1,050	750
Others	1,950	1,500
Totals	6,850	6,450

NEW MEXICO

Table Mesa	100	100
Artesia	1,400	1,300
Hogback	600	600
Rattlesnake	50	500
Others	100	100
Totals	2,250	2,600
Totals Mountain States	74,450	79,550

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.)	112,000	113,750

PRODUCTION SUMMARY

East of Rockies	1,785,650	1,775,200
United States	2,487,500	2,480,750

ANOTHER ABERCROMBIE JOB!

WITH THE J.S. ABERCROMBIE INSIDE CUTTING TOOL

Cut from below 5100 ft. in the McLean No. 14 Well of the Sun Oil Co.

—NOTE the wire-wrapped screen and well bottom which was cut and removed in this job.

No One Can Question—

—the efficiency of a tool that makes 18 CUTS in 4½-IN.—15.50 LB. LINER and WIRE WRAPPED SCREEN—and leaves the hole absolutely CLEAN below the 6⅝-in. casing—BELOW 5100 FT.

THAT'S the kind of PERFORMANCE you can expect with the IMPROVED Abercrombie Inside Cutting Tool.

Write or Wire for Full Information

J. S. ABERCROMBIE Co.
616-18 West Bldg. Houston, Texas

CRUDE OIL PRICE QUOTATIONS

CURRENT POSTINGS

EASTERN STATES

	Dec. 14 1927
New York Transit	2.65
Bradford District	2.65
National Transit	2.55
Southwest	2.55
Eureka	2.50
Buckeye	2.25
Macksburg	2.80
Gaines	2.60
Somerset	1.50
Cabell	1.40
Ragland	.95
Corning, 35-cent grade	1.45
Corning, 25-cent grade	1.35
Keister	1.10

CENTRAL STATES

Illinois	1.60
Indiana	1.48
Lima	1.71
Plymouth	1.33
Princeton	1.60
Waterloo	1.18
Wooster	1.57

WESTERN KENTUCKY

Posted by Stoll Refining Company for crude from Allen, Warren, Franklin, Davies, Barren,

All grades	1.50

MID-CONTINENT

Prairie, Sinclair, Gulf, Texas and Magnolia*

	Dec. 14 1927
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

*Magnolia's price for below 30 gravity is $1.05. Magnolia's price on Glasscock County crude is 80 cents per barrel, flat, and is also 80 cents on all crude in Howard County that comes from section 136, block 29 W & NW Railway Survey.

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs crude.

Humble O. & R. Co. and Texas Co.*

	Dec. 14 1927
Below 25 gravity	.90
25 to 25.9 gravity	1.06
26 to 26.9 gravity	1.08
27 to 27.9 gravity	1.10
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.0 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

Corsicana Heavy, 1.00 per barrel, posted by Magnolia.

*The Texas Company's Postings begin at 28 to 28.9.

SOUTH TEXAS

Mirando	1.00

SOMERSET
Grayburg

	Dec. 14 1927
Below 33 gravity	$1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

GULF COAST

Grade "A" all companies	1.20
Gulf Coast Light Oil, Below 2	1.15
25 to 25.9 gravity	1.17
26 to 26.9 gravity	1.19
27 to 27.9 gravity	1.21
28 to 28.9 gravity	1.23
29 to 29.9 gravity	1.25
30 to 30.9 gravity	1.27
31 to 31.9 gravity	1.29
32 to 32.9 gravity	1.31
33 to 33.9 gravity	1.33
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.37
36 to 36.9 gravity	1.39
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.43
39 to 39.9 gravity	1.45
40 and above	1.47

*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crudes above 35 is $1.37 per barrel.

Magnolia Petroleum Company's postings stop at 31 to 31.9.

(Continued on page 64)

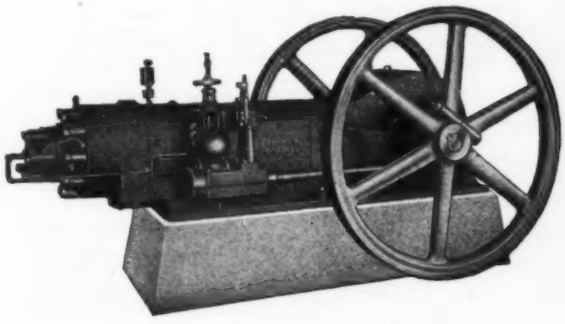
CALIFORNIA CRUDE OIL PRICES AT THE WELL

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 galolns in fields indicated)

Gravity (degrees)	Signal Hill	Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans-Dominguez	Torrance	Richfield	Whittier La Habra	Montebello	Coyotte Hill	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler
14-14-9	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75
15-15-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
16-16-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
17-17-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
18-18-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
19-19-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
20-20-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	..	.77	.77	.77	.76	.76
21-21-9	.86	.86	.86	.86	.86	..	.86	.86	.85	.85	.86	.85	..	.79	.79	.79	.77	.77
22-22-9	.87	.87	.87	.87	.87	..	.87	.87	.85	.85	.87	.85	..	.81	.81	.81	.78	.78
23-23-9	.88	.88	.88	.88	.88	..	.88	.88	..	.85	.88	.85	..	.83	.83	.83	.79	.79
24-24-9	.89	.89	.89	.89	.89	..	.89	.89	..	.85	.89	.85	..	.85	.85	.85	.80	.80
25-25-9	.90	.90	.90	.90	.90	.90	.90	.90	..	.86	.90	.86	..	.87	.87	.87	.81	.81
26-26-9	.92	.92	.92	.92	.92	.92	.92	.92	..	.87	.91	.87	..	.89	.89	.89	.83	.82
27-27-9	.94	.94	.94	.94	.94	.94	.94	.94	..	.88	.92	.88	..	.91	.91	.91	.85	.83
28-28-9	.96	.96	.96	.96	.96	.96	.96	.96	..	.89	.93	.89	..	.93	.93	.93	.87	..
29-29-9	.98	.98	.98	..	.98	.98	..	.98	..	.90	.94	.91	..	.96	.96	.96	.89	..
30-30-9	1.00	1.00	1.00	..	1.00	1.00	..	1.00	..	.91	.95	.93	..	.99	.99	.99	.91	..
31-31-9	1.03	1.03	1.03	..	..	1.03	..	..	..	..	..	.95	..	1.02	1.02	1.02	.93	..
32-32-9	1.06	1.06	1.06	..	..	1.06	..	..	..	..	..	.97	..	1.05	1.05	1.05	.95	..
33-33-9	..	..	..	..	..	1.09	..	..	..	..	..	.99	..	1.08	1.08	1.08	.97	..
34-34-9	..	..	..	..	..	1.12	..	..	..	..	..	1.01	..	..	..	1.11	.99	..
35-35-9	..	..	..	..	..	1.15	..	..	..	..	..	1.03	..	..	..	..	1.01	..
36-36-9	..	..	..	..	..	1.18	..	..	..	..	..	1.06	..	..	..	..	..	..
37-37-9	..	..	..	..	..	1.21	..	..	..	..	..	1.09	..	..	..	..	..	..
38-38-9	..	..	..	..	..	1.24	..	..	..	..	..	1.12	..	..	..	..	..	..
39-39-9	..	..	..	..	..	1.27	..	..	..	..	..	1.15	..	..	..	..	..	..
40-40-9	..	..	..	..	..	1.30	..	..	..	..	.	..	..	..	..	..	..	..
41-41-9	..	..	..	..	..	1.33	..	..	..	..	.	..	..	..	..	.	..	..
42-42-9	..	..	..	..	..	1.36	..	..	..	..	.	.	..	..	..	.	..	..

FRANKLIN VALVELESS
OIL AND GAS ENGINES

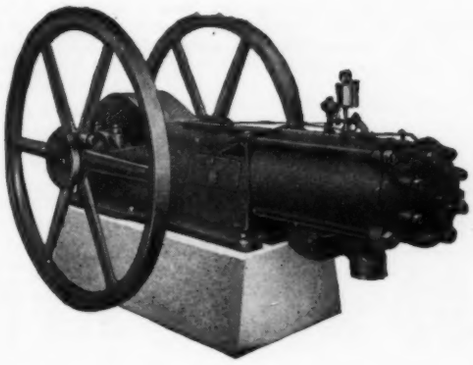
Franklin Pumping Engines



Oil Pumping Engine

Here is the power plant that has the fewest possible number of parts to require attention, adjustment, repairs or replacement. After you've finished drilling, move in one of the Franklin Oil Pumping Engines. Any user will tell you that it can be operated at an extremely low fuel, water and lubricating cost.

These pumpers come in 30, 40, 50 and 75 Horse Power. Can be equipped with Reverse or One Way Clutch.



Gas Pumping Engine

After you've finished making hole, move your Drilling Engine to the next job and hook up a Franklin Gas Pumping Engine. Interchangeable on the same block without shifting a single bolt. These engines can show you a power, speed and flexibility almost unbelievable.

Say good-bye to the old "biler" and learn what real economy and freedom from trouble is like. Ask any Franklin user!

FRANKLIN VALVELESS ENGINE CO.
FRANKLIN, PENNA.

Distributed by

Oil Well Supply Co.

Branches in All Oil Fields

MARKHAM

	Dec. 14 1927
The Texas Company	
All grades	1.00

LULING

All grades	1.00

PANHANDLE

(Humble Oil & Refining Company and Magnolia Petroleum Company, Gulf Pipe Line Company, and Kay County Gas Company)*

Hutchinson, Carson and Wheeler counties, all grades	.75

*Gulf and Kay County do not post in Wheeler County.

Gray County

(Humble Oil & Refining Company)

28 to 28.9 gravity	.80
29 to 29.9 gravity	.82
30 to 30.9 gravity	.84
31 to 31.9 gravity	.86
32 to 32.9 gravity	.88
33 to 33.9 gravity	.90
34 to 34.9 gravity	.92
35 to 35.9 gravity	.94
36 to 36.9 gravity	.96
37 to 37.9 gravity	.98
38 to 38.9 gravity	1.00
39 to 39.9 gravity	1.02
40 to 40.9 gravity	1.04
41 to 41.9 gravity	1.06
42 to 42.9 gravity	1.08
43 to 43.9 gravity	1.10
44 and above	1.12

(Humble Oil & Refining Company)

Crane, Upton, Crockett and Pecos counties, all grades	.60

WEST TEXAS

(Humble, Gulf, Magnolia, Kay County Gas Company and Southern Crude Oil Purchasing Company.)*

Crane, Crockett, Pecos, Upton and Winkler Counties	.60

*Kay County Gas Company does not buy in Winkler and Pecos Counties, and Southern does not buy in Pecos or Crockett.

Col-Tex Refining Company

Mitchell County	$ .93

WYOMING-MONTANA

Wyoming

Byron	1.33
Ferris	1.60
Elk Basin	133
Grass Creek	1.33
Rock Creek	1.25
Lost Soldier	.95
Lance Creek	1.33
Mule Creek	1.10
Notches	.65
Big Muddy	1.25
Osage	1.33
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.33
Lander	.80
Simpson Ridge	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

Salt Creek

Midwest Refining Company

29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 and above	1.30

MONTANA

Sunburst	1.35
Cat Creek	1.33
Lake Basin	2.20

NEW MEXICO

Artesia	1.00
Hogback	1.38

CANADIAN CRUDE

	Dec. 14 1927
Oil Springs	2.18
Petrolia	2.11

*Bounty on Canadian crude is ¾ cent per gallon, or 26¼ cents per barrel.

LOUISIANA-ARKANSAS

(Standard of Louisiana, Louisiana Oil Refining Company, Gulf Refining Company of Louisiana and The Texas Co.) Homer, Haynesville, Caddo, El Dorado, De Soto and Chrichton.

Below 28 gravity	1.10
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

Atlantic Oil Producing Company posts this same schedule on Homer, Haynesville, and West El Dorado.

Magnolia Petroleum Company has the same posting on Pine Island, Haynesville, Eldorado and Bull Bayou.

STEPHENS

(All Companies)

Below 28	1.00
28 to 28.9 gravity	1.04
29 to 29.9 gravity	1.04
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.08
32 and above	1.10

SMACKOVER

(All Companies)

Below 24 gravity	$ .85
24 and above	1.00

Bellevue	1.25
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	.75
Cotton Valley	.85
Calion	.85

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

American Petroleum Institute Figures. Barrels of 42 gallons)

	Total Month November	Total Month October	Week Ended Dec. 3	Week Ended Nov. 26
AT ATLANTIC COAST PORTS—				
Baltimore	1,057,000	808,000	409,000	152,000
Boston	241,000	406,000	.....	.....
New York	2,536,000	2,460,000	609,000	832,000
Philadelphia	903,000	119,000	216,000	234,000
Others	812,000	1,057,000	156,000	165,000
Total	5,549,000	4,850,000	1,390,000	1,383,000
Daily Average	184,967	156,451	198,571	197,571
AT GULF COAST PORTS—				
Galveston District	120,000	50,000	.....	.....
New Orleans and Baton Rouge	795,000	599,000	140,000	163,000
Port Arthur and Sabine District	60,000	25,000	.....	*60,000
Tampa	50,000	58,000	.....	.....
Total	1,025,000	732,000	140,000	223,000
Daily Average	34,167	23,613	20,000	31,857
AT ALL UNITED STATES PORTS—				
Total	6,574,000	5,582,000	1,530,000	1,606,000
Daily Average	219,133	180,064	218,571	229,428

*—Revised.

RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

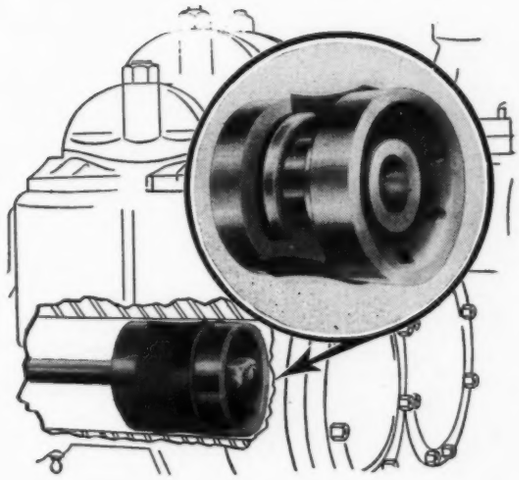
American Petroleum Institute Figures. Barrels of 42 gallons)

	Total Month November	Total Month October	Week Ended Dec. 3	Week Ended Nov. 26
AT ATLANTIC COAST PORTS—				
Baltimore	283,000	649,000	.....	.....
Boston	85,000	135,000	.....	.....
New York	691,000	1,485,000	459,000	77,000
Philadelphia	455,000	438,000	74,000	.....
Others	148,000	446,000	.....	.....
Total	1,662,000	3,155,000	533,000	77,000
Daily Average	55,400	101,774	76,143	11,000
AT GULF COAST PORTS—				
Daily Average	.....	.....	.....	.....
ATLANTIC AND GULF COAST PORTS—				
Total	1,662,000	3,155,000	533,000	77,000
Daily Average	55,400	101,774	76,143	11,000
DISTRIBUTION OF TOTAL CALIFORNIA RECEIPTS IS AS FOLLOWS:				
Crude	741,000	785,000	216,000	.....
Gasoline	633,000	1,139,000	224,000	77,000
Gas Oil	148,000	311,000	93,000	.....
Fuel Oil	140,000	862,000	.....	.....
Lubricants	.....	58,000	.....	.....
Total	1,662,000	3,155,000	533,000	77,000

Greater Economy for the Oil Industry—

Reduced Prices—The Same High Quality On All Sizes

Kibele Patented Pressure Piston



The Kibele Piston, made especially for rotary drilling slush pumps, boiler feed, and oil gathering pumps, has been tested and is now being used by some of the largest users of pump equipment. They have found that it will outlast the average piston four or five times.

Reduced prices now in effect mean an even greater saving to the Oil Industry.

* * *

Our service department will gladly install these pistons for you and help solve your pump problems.

New prices will be furnished you by your supply store or by writing direct to Mission Sales Company.

Complete Stocks at your Supply Store.

Mission Sales Company

Esperson Building

Houston, Texas

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	4	2	1	..	1	1	2	1	10	.....
California	17	24	15	15	..	..	2	9	4,405	9,925
Illinois	5	5	4	3	..	..	1	2	90	29
Indiana	6	2	3	1	..	..	3	1	140	12
Kansas	13	17	3	7	..	1	10	9	305	800
Kentucky	30	25	20	21	1	..	9	4	600	679
Louisiana	19	12	8	3	3	5	8	4	1,375	175
Michigan	1	1	..	1	..	..	1	..	.....	20
New York	..	8	..	8	..	..	..	..	.....	16
Ohio	20	42	14	18	1	12	5	12	181	693
Oklahoma	83	71	44	42	11	8	28	21	17,431	22,221
Pennsylvania	15	28	2	22	12	4	1	2	42	96
Texas	92	125	51	64	5	16	36	45	81,917	99,637
West Virginia	35	43	12	7	21	30	2	6	235	213
Wyoming	7	..	7	..	..	..	..	..	234	.....
Totals	347	405	184	212	55	77	108	116	106,965	134,516
Increase this week	..	..	..	..	..	..	..	..	.....	.....
Decrease this week	58	..	28	..	22	..	8	..	27,551	.....

NOTE—Following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: •—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; aba—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fah—fishing; ft—feet; in—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

KANSAS

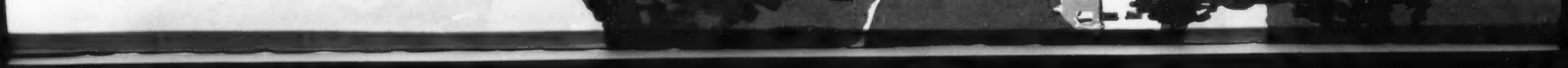
Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Bronson et al, Doughty 3, csl ne sw 5-27-6e	100	2760
Appleman et al, Watson 1, nw c sw nw, 36-24-4e	•	863
CHASE COUNTY—		
Empire O. & R. Co. et al, Crosby 1, se c nw, 24-22-9e	•	2697
COWLEY COUNTY—		
Vickers & Phil-Mac, Graham 1, se c nw nw, 22-32-4e	•	3017
DICKINSON COUNTY—		
Frank et al, Kutler 1, sw c se, 15-16-4e	•	2658
ELLIS COUNTY—		
Mid-West, Reidell 19, nw c sw se, 27-13-16w	•	3870
GREENWOOD COUNTY—		
Christy et al, Hoover 1, csl se ne, 36-24-12e	200	1650
Higgins et al, Cummings 1, nw c ne nw, 2-26-10e	5	2026
Skelly Oil Co., Prater "C" 1, sw c ne nw, 21-22-10e	•	2305
Federal Oil Co., Storrer 3, Lot 39 north, 30-22-13e	•	990
Polhamus et al, Halverson 3, se c nw, 26-24-9e	•	2684
McPHERSON COUNTY—		
Mid-Kansas, Jones 1, sw c ne, 26-19-3w	•	3635
MARION COUNTY—		
Empire O. & R. Co., Schlothour 1, ne c sw ne, 9-20-4e	•	2673

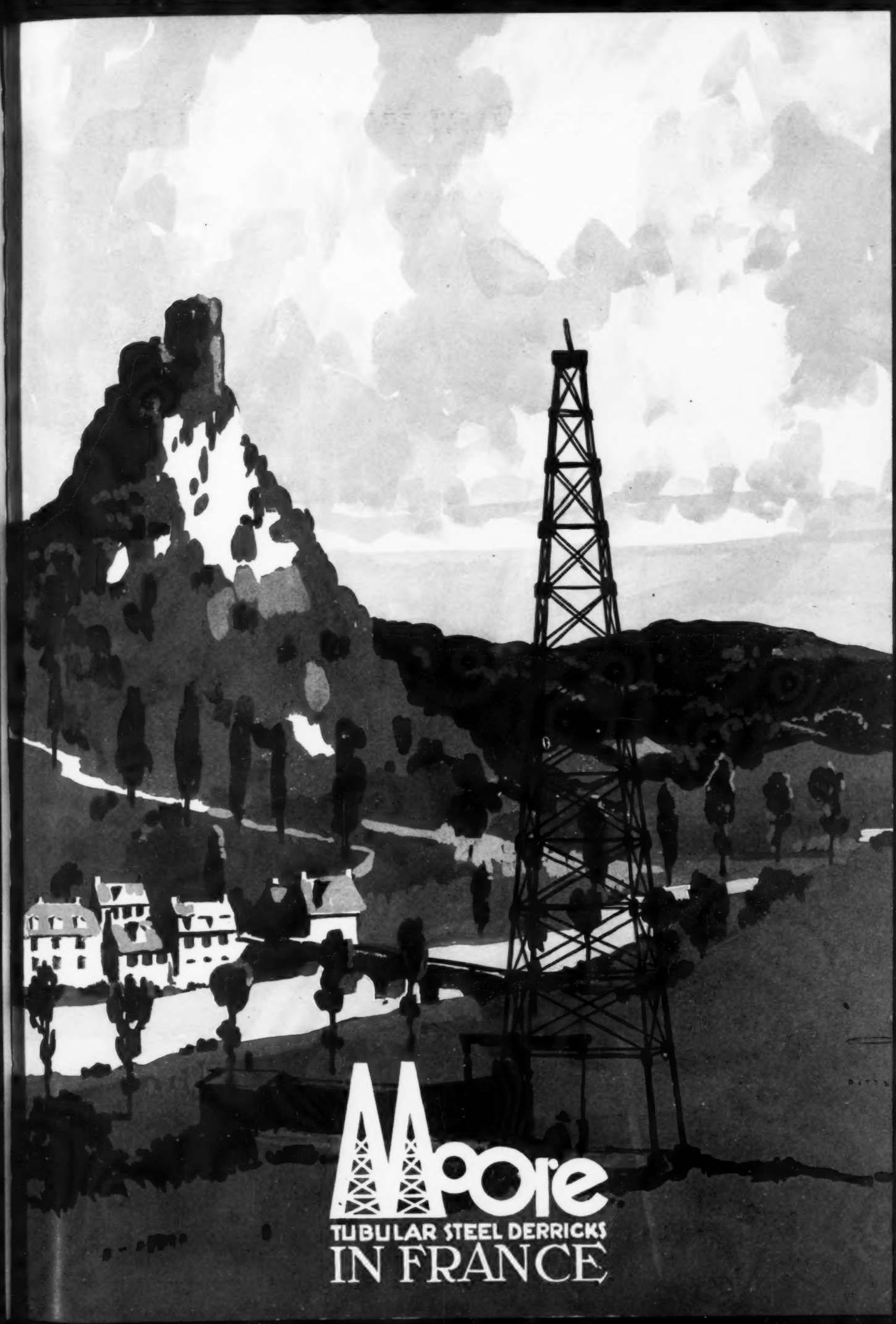
OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
BECKHAM COUNTY—		
Cal Wright, Traves 1, nw c se se, 30-9n-23w	•	3260
CADDO COUNTY—		
Okla. Gas Utilities Co., McCaughtry 2, ne sw nw, 35-5n-8w	¶35	2400
Farwell 1, sw se se, 23-5n-8w	¶20	2404
Moran et al, Cutshall 1, ne se sw, 5-5n-9w	80	1846
CLEVELAND COUNTY—		
Mid-Continent Pet. Corp., Woodrow 1, sw c nw, 20-8n-1e	•	4725
CREEK COUNTY—		
Peters Pet. Co., Arysalle 4, nw c se ne, 21-16-8e	140	3157
Gibson & Becker, M. Tiger 2, ne c sw nw sw, 17-17-7e	300	2780
Indep. O. & G. Co., Wolfe 6, se c nw ne, 18-14-10e	¶1	448
Pontiac Oil Co., Baker 1, se c ne, 14-17-10e	75	1938
Fulsom 10, nw c sw, 13-17-10e	70	1933
Olean Pet. Co., McGilbra 5, sw c ne ne, 30-14-7e	•	4140
C. O. Buckles et al, Cloud 1A, sw c se ne, 22-18-8e	•	1330
The Texas Co., Strip 1, se c ne, 2-16-11		*2706
Henry Oil Co. et al, Unalotted 1, se c sw se, 1-17-10e	•	2903
GARFIELD COUNTY—		
Amerada, Wilcox 1, sw c ne, 19-23-3w	60	5576
T. T. Easton et al, Doak 1, cel ne nw, 26-22-4w	•	2395
Chappell et al, Dively 4, c sw se, 14-22-4w	•	2420
GRADY COUNTY—		
J. B. Nichols, Scott 1A, ne se ne, 34-5n-8w	15	2488
Marland, Burke 3, nw c sw, 16-3n-5w	•	2425
Meridian Gas Co., Ramsey 2, c se ne, 10-4n-8w	•	2575
Rookstool et al, Kayser 1, c nw se, 3-4n-8w	•	3365
John Graham, Steelman 1, cnl nw nw, 16-5n-7w	•	3201
KAY COUNTY—		
Greer, Walters et al, Naylor 1, cel w½ nw ne, 31-28-1e	¶2	1055
Carter Oil Co. et al, Shimp 5, c nw sw, 17-29-1e	¶2	1470
Jameson 3, se c ne, 17-27-1w	•	3665
Blackwell O. & G. Co., Whiteside 1, c se sw, 25-28-1w	•	1665
LOGAN COUNTY—		
Texas Pacific Coal & Oil Co., Speaks 1 se c nw, 33-18-4w	20	4144
MUSKOGEE COUNTY—		
O. T. Gilbertson, Cherry 4 A, cwl sw nw, 27-14-16e	50	1637
J. L. Dixon, Davis 4, sw c nw nw, 12-14-18e	•	1033
NOBLE COUNTY—		
Magnolia, Phearson 1, nw c se, 15-21-2w	20	4480
OKMULGEE COUNTY—		
Farrell & Lavery, Scott 1, nw c se, 6-15-13e	¶33	2102
J. L. Powell, Thomas 4, csl ne se, 23-14-14e	•	1952
A. W. Cline, Rowe 1A, nw c sw nw, 30-15-14e	•	2330
OSAGE COUNTY—		
Geo. Tselos, 3, nw sw ne, 11-24-11e	15	1740
I. T. I. O. Co., 383, ne c se se, 35-26-11e	¶4	1603
Geo. Parker, 2, nw c, 11-26-6e	430	2660
Kewanee O. & G. Co., 9, se ne nw, 34-27-6e	110	2895
M. M. Lefever, 14, se c sw nw, 1-28-10e	•	1814
PAWNEE COUNTY—		
Superior Oil Corp., Scott 1A, se c nw ne, 20-21-7e	•	3228
PONTOTOC COUNTY—		
Homa Okla. Oil Co., Miller 4, nw se se, 17-5n-8e	70	2543
McCall 3, sw se nw, 17-5n-8e	¶30	2365
American O. & R. Co., Miller 1, ne se sw, 27-5n-6e	¶5	1869
Homa Okla. Oil Co., Watson 2, se c ne sw, 33-5n-8e	•	1560
POTTAWATOMIE COUNTY—		
Magnolia, Harper 1, nw c ne, 19-7-5	6	3890
Pierce Pet. Co. et al, Davis 4, sw ne nw, 30-7-4e	310	3874
Magnolia, Davis 1, nw c ne, 24-7-4e	75	4175
Indep. O. & G. Co., & Darby Pet. Co., LeClari 1, sw nw ne, 23-7-4e	940	3925
W. B. Pine, Hamlin 1, ne se se, 27-9-4e	•	4692
McCullough Oil Co., Scott 1, ne c sw, 2-9-2e	•	5134
SEMINOLE COUNTY—		
Magnolia, Lena 6, nw c ne nw sw, 32-8-8	70	4182
I. T. I. O. Co., Phoebe "B" 1, se ne sw, 36-8-6	475	4244
Dugan 4, nw sw se, 35-8-6	245	4504
Blackwell O. & G. Co., Nitey 7, nw ne se, 35-8-6	660	4419
Nitey 4, ne se se, 35-8-6	60	4253
Carter Oil Co., Hilly 2, nw ne se, 23-8-6	660	4622
Burden 2, ne c sw, 23-8-6	90	4475
Mid-Continent Pet. Corp., Smith 5, ne se sw, 12-8-6	680	4661
Sinclair O. & G. Co., C. Jones 7, ne c se, 9-8-6	250	4216
C. Jones 6, sw ne se, 9-8-6	185	4148
Wilcox O. & G. Co., Cluck 8, sw ne nw, 4-9-6	325	4444
Twin State Oil Co., Jeming 2, nw se nw, 4-9-6	200	4459
Carter, Frazier 7, nw ne nw, 3-9-6	1225	4375
Magnolia, Dixon 4, nw se sw, 12-9-5	195	4361
Holmsley 8, ne se se, 11-9-5	700	4431
Barnsdall, N. Bruner 4, ne c, 10-9-5	600	4618
The Texas Co., Anderson 5, nw se se, 2-9-5	375	4427
Anderson 3, sw se se, 2-9-5	450	4337
Gypsy, Sango 1, sw c ne, 1-9-5	1317	4353
Barnsdall, Sango 3, sw c nw, 1-9-5	1070	4371
Continental Oil Co., Pierce 1, sw c se, 33-11-8e	4140	4446
I. T. I. O. Co., Nitey 11, sw nw ne, 2-7-6	•	....
Nitey 12, se nw ne, 2-7-6	•	4544
Nitey 10, nw sw ne, 2-7-6	•	....
Snowden & McSweeney, Epply 1, sw nw ne, 15-10-8	•	3552
STEPHENS COUNTY—		
Magnolia, W. H. Bell 1, ne se sw, 13-1s-4w	330	2812
C. R. Smith, Peddycourt 1, ne nw ne, 25-1s-4w	¶10	2785
Ellis Drlg. Co., Night 4, sw c nw, 34-1s-8w	200	1930
Hupp & Duff, Fee 2, sw c ne, 34-1s-8w	20	1725
Owen & Wood, Massey 6, csl se nw, 12-2s-8w	117	2086
Beard & Cobb, Brigham 1, sw c, 30-1s-8w	•	2200
WAGONER COUNTY—		
Peterson & Young, Jameson 1, c ne sw, 23-16-16e	¶4	1265
Bu Vi Bar Pet. Co., E. Tiger 1A, ne c se, 30-18-15e	6	1265
Shaffer, Dan 1, ne sw nw, 21-17-15e	6	1977

DS

Initial production bbls.	Depth
¶4	1603
430	2660
110	2895
*	1814
*	3228
70	2543
¶30	2365
¶5	1869
*	1560
6	3890
310	3874
75	4175
940	3925
*	4692
*	5134
70	4182
575	4244
945	4504
60	4419
60	4253
60	4622
90	4475
80	4661
50	4216
85	4148
25	4444
00	4459
25	4375
95	4361
30	4431
00	4618
75	4427
50	4337
17	4353
70	4371
30	4446
*	....
*	4544
*	....
*	3552
0	2812
0	2785
0	1930
0	1725
7	2086
*	2200
4	1265
5	1265
5	1977

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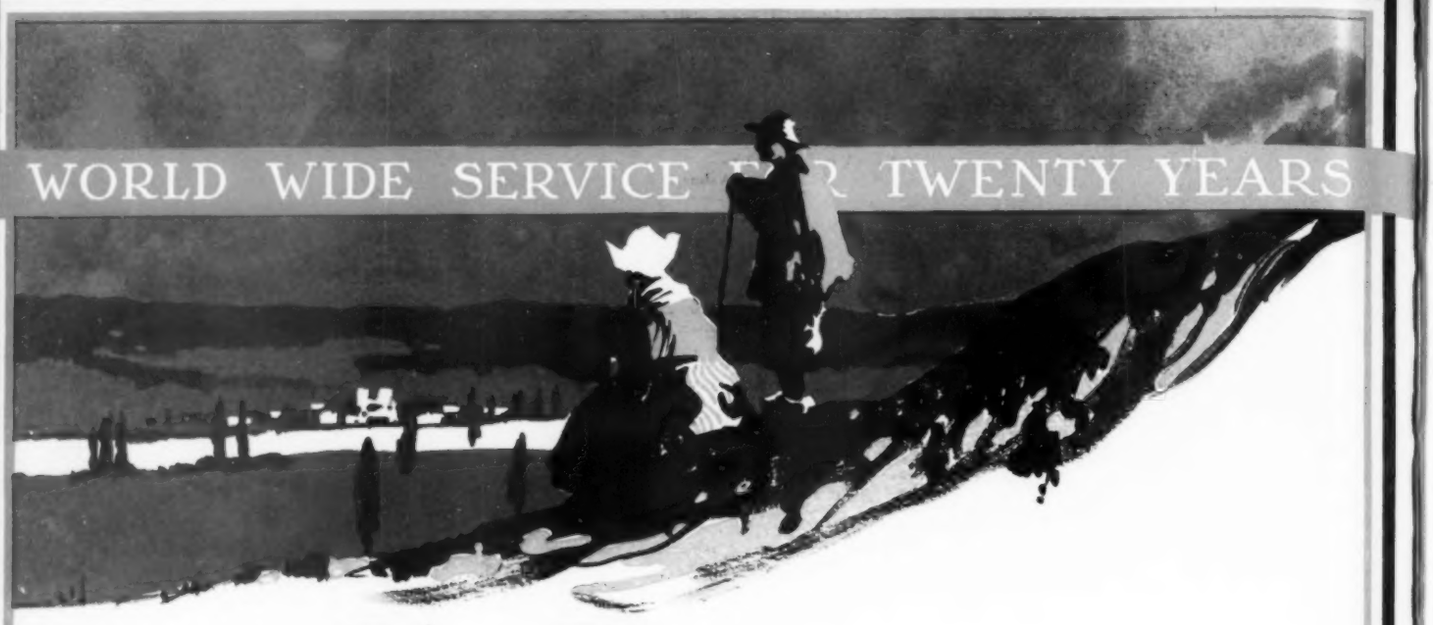
TUBULAR STEEL DERRICKS
IN FRANCE



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Where some of the first wells in the world were put down, Moore Tubular Steel Derricks are helping to keep the field productive. Although the first crude implements served to open the earth's rich storehouse, France now demands and uses the most modern equipment.

Here, as in all other oil lands, the economy and complete dependability of Moore derricks have won for them an undeniable prestige.

Moore
TUBULAR STEEL DERRICKS

LEE C. MOORE & COMPANY, INC. PITTSBURGH · TULSA

Established 1907

Dallas, Texas **Houston, Texas** **Wichita Falls, Texas** **Borger, Texas** **Parkersburg, W.Va.**
Casper, Wyo. **Shreveport, La.** **El Dorado, Kan.** **El Dorado, Ark.**

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
ALLEGHANY COUNTY—		
Chemical O. & G. Co., Campbell 1	40	....
Martin & Co., Hannah 1	¶1	....
Fink O. & G. Co., Kale Hrs. 2	¶¼	....
WASHINGTON COUNTY—		
Carnegie Nat. Gas Co., Nichols 1	*	....
Hassinger & Jordan, Hess 1	¶½	....
Wasco Fuel Co., Leonard 1	2	....
Manufacturers Light & Heat Co., Patterson 2	¶1	....
Benedum & Trees, Hill 3	¶½	....
Scenery Hill, lot 15, tr 1	¶½	....
Scene y Hill lot 41, tr 1	¶½	....
Dr. Ritter & Co., Scenery Hill, Lot 42, tr 1	¶½	....
Roy Fletcher & Co., Scenery Hill, Lot 42, tr 1	¶½	....
Scenery Hill, lot 39, tr 1	¶½	....
GREENE COUNTY—		
Manufacturers Light & Heat Co., Donley 1	¶¼	....
BEAVER COUNTY—		
Laughner O. & G. Co., Bayless 1	¶¼	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
RITCHIE COUNTY—		
Cairo Oil Co., Morris 1, Cochrane & Hays, McGregor Hrs 3	15	....
Hope Cons. & Ref. Co., Jordan 2	4	....
J. F. Deem & Co., Lingler 3	5	....
Joshua Haught, Haught 1	*	....
West Fork Oil Co., Andrews 1	5	....
Astron Oil Co., Strusburg 7	3	....
CALHOUN COUNTY—		
McCall Drilling Co., Laughlin 1	¶1	....
Hope Cons. & Ref. Co., Parson-Bennett 1	¶½	....
Park Bowser, Richards 1	3	....
W. H. Bickel, Knight 1	¶1½	....
W. S. Dailey & Son, Robinson 1	¶1½	....
GILMER COUNTY—		
Chartiers Oil Co., Stump 5	140	....
Steer Creek Oil Co., Molohon 1	¶1½	....
Hope Nat. Gas Co., Bennett-Parsons 1	¶1¼	....
CLAY COUNTY—		
Ohio Fuel Oil Co., Jas. Reed & Co. 5	20	....
South Penn Oil Co., Stockley 65	15	....
D. H. Stephenson & Co., Bowman 1	¶¼	....
LINCOLN COUNTY—		
G. T. Ray & Co., J. Cooper 2	¶¼	....
Stowers 1	¶½	....
BRAXTON COUNTY—		
Pittsburg & W. Va. Gas Co., Bourne 1	¶2	....
C. R. Bourne 1	¶2	....
MARSHALL COUNTY—		
Manufacturers Light & Heat Co., Hicks-Pipes 2	*	....
McCleary 3	¶2¼	....
ROANE COUNTY—		
Heck Oil Co., Allen 1	15	....
Cromwell & Osborne, Tawney 1	¶1½	....
United Carbon Co., Keene 1	¶¼	....
WETZEL COUNTY—		
S. W. Ellis, Maple 5	5	....
PLEASANTS COUNTY—		
Keith Thompson, Adams 1	5	....
KANAWHA COUNTY—		
United Fuel Gas Co., Snyder 1	¶1¼	....
CABELL COUNTY—		
Pittsburg & W. Va. Gas Co., Alberts 1	¶¼	....
TYLER COUNTY—		
American Oil Co., Smith 1	¶½	....
DODDRIDGE COUNTY—		
Manufacturers Light & Heat Co., Farr 1	¶1	....
PUTNAM COUNTY—		
Wysong & Jaynes, Roberts-Vanderlinde 1	¶¼	....
LEWIS COUNTY—		
Cumberland-Alleghany Gas Co., Rinehart 1	¶1	4330

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
ESTILL COUNTY—		
Reno Oil Co., Mitchell 6	2	....
Goff 7	*	....
Waco Oil Co., Rawlins 16	5	....
Superior Oil Corp., Alexander 27, 28	*	....
Herndon 21	3	....
Brenner, Adams & Co., Stacey 7	3	....
Sparks 8	3	....
LEE-OWSLEY COUNTIES—		
Tipton & Tackett, Vanderpool 3	*	....
Cook & Co., Bryant 2	2	....
Hevins-Spencer D. & T. Co., Darts & Short 3	2	....
JOHNSON-MAGOFFIN COUNTIES—		
Short Fork Oil Co., Frazier 6	10	....
WOLFE COUNTY—		
Superior Oil Corp., Asbury 7	3	....
WAYNE COUNTY—		
Marsh & Hicks, Guffey 1	*	....
FLOYD COUNTY—		
United Carbon Black Co., Gearhart 2	¶2	....
OHIO COUNTY—		
Kelly, Yewell & Co., Hamilton 1	200	....
Earl Patton & Co., Wilson 5	100	419
Wood Oil Co., Smith 4	100	408
Jordan, Short & Co., Jolly 1	50	....
J. C. Ellis, Gossett 1	20	....
Moseley 1	*	....
Thrasher, Shouse & Co., Renfrew 1, 2	*	....
Creek Drilling Co., Early 11	*	....
George Boles & Co., Estridge 1	*	....
The Ohio Oil Co., Lake 3	5	....
DAVIESS COUNTY—		
The Ohio Oil Co., Roby 1	50	....
EDMONDSON COUNTY—		
Green River Oil Co., Potigue 2	*	....
BARREN COUNTY—		
Stombo & White, Willimson 5	10	....
A. W. Ziegler, Gooden 3	10	....
F. C. Moore & Co., Myers 3	5	....
Samson Oil Co., Loden 7	20	....

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
WASHINGTON COUNTY—		
O. S. Reckard & Co., Parsons 1	3	....
Hill Top O. & G. Co., Oliver 2	2	....
MONROE COUNTY—		
Herman C. Bader, Hughes 1	5	....
J. H. Walker & Co., Nubeck 4	*	....
NOBLE COUNTY—		
Ohio Fuel Supply Co., Harding 1	¶¼	....
BELMONT COUNTY—		
H. Rinehart, Starbusk 1	*	....

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
MEDINA COUNTY—		
E. R. Edson Son Co., Wertz 36	2	....
Wertz 37	*	....
Johnson & McBeth, Brinker 1	2	....
HOCKING COUNTY—		
Limelight O. & G. Co., Lane 1	20	....
Columbus, O., Interests, Ralston 2	*	....
LICKING COUNTY—		
Faemer & Rugg, Wright 3	8	....
Vanatta Oil Co., Williams 1	*	....
GUERNSEY COUNTY—		
Davis Bros., Micha 1	65	....
ATHENS COUNTY—		
Cook & Co., Woodyard 2	3	....
PERRY COUNTY—		
Roan O. & G. Co., Roan 1	3	....

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
AUGLAIZE COUNTY—		
W. E. Cook & Co., Dubois 1	26	1288
ALLEN COUNTY—		
W. W. Bolz, Roberts 1	25	....
SANDUSKY COUNTY—		
G. Magsig & Son, Magsig 29	12	1298
HARDIN COUNTY—		
H. E. Schmidt, Hites 9	5	1450

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
JAY COUNTY—		
Waterloo O. & G. Co., Brinkerhoff 7	20	....
Knox Oil Co., Kessler 1	*	....
SULLIVAN COUNTY—		
Siosi Oil Corp., Thomas 4	100	....
SPENCER COUNTY—		
D. D. Flanagan, Hoover 1	20	1220
WELLS COUNTY—		
Lawrenceville Drilling Co., Bertha Twibell 1	*	....
GIBSON COUNTY—		
J. S. Young & Co., Carrithers 1	*	606

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
CRAWFORD COUNTY—		
Porterville Oil Co., Price 1	20	1048
C. C. Watson & Co., Joseph 9	5	869
WABASH COUNTY—		
G. D. Eoomey & Co., Courtier 15	30	1522
Dewees & Co., Banks 1	*	....
LAWRENCE COUNTY—		
The Ohio Oil Co., Smith-Neeley 39	35	1001

MICHIGAN

Company, Well and Location	Initial Production Bbls.	Depth
VAN BUREN COUNTY—		
Wert O. & G. Co., Vought 2	*	1107

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
KERN FRONT—		
George F. Getty, Lenhart 17, 14-28-17	100	2315
Chansler-Canfield Midway Oil Co., No. 10, 23-18-27	180	2285
General Pet. Corp., Young 20, 14-28-27	125	2075
Pet. Securities Co., B2, 22-28-27	80	2060
Standard, No. 15, 15-28-27	200	2280
LONG BEACH—		
R. R. Bush, Graham 2	1000	5710
Calif. Eastern Oil Co., Masse 1	1100	6350
Pan American Pet. Co., Anderson 3	650	5975
Superior Oil Co., Swaffield 2A	350	6170
RICHFIELD—		
Calif. Pet. Corp., Bradford 7	100	4705
SANTA FE SPRINGS—		
Calif. Pet. Corp., Mattern 6, wo	200	4580
SEAL BEACH—		
H. J. Barneson, B. & S. 1	*	5425
Richfield Oil Co., Doyly-Clune 1	170	5260
TAPO CANYON—		
Continental Oil Co., Newhall 3	75	900
TORRANCE—		
Standard, Marble Fee 11, wo	25	3785
WHEELER RIDGE—		
Standard Oil Co., No. 31	50	2565

LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
BOSSIER PARISH—		
R. L. Crook, Larkin 8, 14-19-11	5	396
Slig Synd, Smith 2, 14-17-12	¶2½	1722
CADDO PARISH—		
Belchic & Laskey, Sharp 3, 11-18-16	¶3	950
Double 1. Oil Co., Watkins 1, 27-21-15	10	1665
Falcon D.lg. Co., Schmidt 1, 27-20-15	75	2202
DE SOSO PARISH—		
American Controlled Oil Co., Lanier 1, 7-11-11	40	2735
LA SALLE PARISH—		
Pima Oil Co., Urania 10, 7-10-2e	60	1538
UNION PARISH—		
Interstate Nat. Gas Co., Steele 1, 36-20-3e	¶5	2162

EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
HARRISON COUNTY—		
J. R. Bahan, Hickman 3, E. Pollack sur.	¶3	2950
PANOLA COUNTY—		
Magnolia, Steele 12, B. C. Jordan sur.	¶2½	984

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
NEVADA COUNTY—		
Burnham et al., Kennedy 1, 9-14-21	10	1262
UNION COUNTY—		
Standard, Murphy 24, 4-16-15	¶5	2609

MOUNTAIN STATES

WYOMING

Company, Well and Location	Initial Production Bbls.	Depth
OSAGE—		
Hawkeye Supply Co., No. 3, sw 18-46-53w	12	1338
LA BARGE—		
Calif. Pet. Corp. 5F, 34-27-113	50	855
Calif. Pet. Corp., 6J, 34-27-113	50	854
Rainbow Oil Co., A7, 3-26n-113w	50	1032
SALT CREEK—		
Wyoming Associated, 18, 14-40-79	42	1420
Wyoming Associated, 22, 23-40-79	20	2245
OSAGE—		
Royal Osage Oil Co., sw 31-46-83	10	343

SOUTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
EDGERLY—		
Hercules Oil Co., Paraffine 3	1200	3700
C. M. Crotty, Lillard 7	10	2225
West Edgerly Oil Co., Krause & Managan	*	5080
EVANGELINE—		
Port City Oil Co., S. F. S. 8	75	1775

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
BATSON—		
East Batson Oil Co., Bates 7	15	1160
BLUE RIDGE—		
J. S. Abercrombie & Co., West-Schenck 4	665	3910
Blakely & Means, Blakely 1	1000	2630
Gulf, L. W. Luscher 10	1500	4250
ORANGE—		
Gulf, Hager & Moore 1	50	3600
Brownie-Babbett Oil Co., McLean 3	40	4050
Sinclair O. & G. Co., Granger 4	*	3300
PIERCE JUNCTION—		
Rio Bravo Oil Co., P. S. A. 7	250	3725
Rio Bravo Oil Co., G. H. & S. A. 1	*	3150
Moody Corp., Hume 2	1200	4350
SARATOGA—		
Gulf, Tabor 17	50	1700
SPINDLE TOP—		
Sun Oil Co., McLean 1	100	3300

HARRISBURG

Forged Seamless Steel Oil Field Products

Say you saw it in The OIL WEEKLY

Yes, Sir, There's a Real Coupling!

"Never gave 'em much thought before. But a week or so ago, when I yanked my draw-works out by the roots I just happened to think—Here I've been usin' Harrisburg Couplings for years and I've never had five minutes trouble in all my experience that I could blame on those couplings. Believe me, they're real!"

The old boy's right. And the things that make Harrisburg Couplings "real" are—special double strength oil-field steel, forged seamless, without weld or weakness. Accurate threads for quick stabbing. Perfect taper for a tight seal, and uniformity in size and hardness always. Harrisburg users are Harrisburg Boosters.

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HARRISBURG

Forged Seamless Steel Oil Field Products

SOUTHWEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
SAN PATRICIO COUNTY—		
Mission Drilling Co., Harwood 1, White Point	*	3000
MEDINA COUNTY—		
Pioneer O. & R. Co., Adams 1, Adams Field	¶4	920
DALE FIELD—		
The Texas Co., Clingingsmith 7	20	3140

NORTH TEXAS

ARCHER COUNTY—		
Atlantic Oil Prod. Co. & Jeffers, Taylor 1	*	1845
L. T. Burns et al, Richardson 1	*	1300
Burns & Texas Co., Turbeville 1-B	*	1575
Burton & Grisham, Farmer 1	*	1513
Consolidated Oil & Simms Co., Turbeville 3	*	1510
Darr et al, Edwards 2	*	1438
Johnson et al, Ward 2	*	1105
Roberts Oil Corp., Garvey 3	40	770
Shappell Oil Co., Wilson 12-B	10	901
Wilson et al, Farmer 2	55	1515
BURKBURNETT—		
John O'Neil et al, A. A. Carl 1	*	1928
COOKE COUNTY—		
Lesh-McCall et al, Inglish 1	*	2273
Murchison Oil Co., Harris 1	*	1799
Simms Oil Co. et al, Bowers 1	*	1801
Sun Oil Co., Hacker 7	20	1682
ELECTRA—		
Consolidated & Texas Co., Waggoner 1	*	2235
Consolidated - Continental & Texas Co., Ancell 1	*	1788
A. T. McDonald et al, Allingham 1	*	2175
The Texas Co., Waggoner 340	*	2250
FOARD COUNTY—		
Fain-McGaha & Roxana, Matthews 1	†	2550
JACK COUNTY—		
Dale Oil Corp., Hanna 4	*	550
Zoch & Marland Oil Co., Holmes 1	*	2540
K-M-A AND IOWA PARK—		
O'Donohoe & Gates, Love 2	20	498
A. T. Wolf et al, Ferguson 1	*	1905
MONTAGUE COUNTY—		
Arco Oil Co., Salmon 1-C	*	1423
SOUTH VERNON DISTRICT—		
Barnes et al, Ancell 2	70	1733
Fain-McGaha et al, Waggoner 1-L	80	2391
Keltz et al, Zipperle 2	*	1475
Muse & Robinson, Womack 1	*	2110
THROCKMORTON COUNTY—		
Associated Pet. Co., Stacey 2	¶6-10	3351
YOUNG COUNTY—		
Roberts Oil Corp., Keen 2	7	836
Keen 3	*	900

TEXAS PANHANDLE

CARSON COUNTY—		
American Ref. Co., Burnett 1-E	40	3149
GRAY COUNTY—		
Rensaul Pet. Corp., Huselby 1	75	2959
HUTCHINSON COUNTY—		
J. J. Gordon et al, Sanford 1	80	3009

WEST TEXAS

CRANE COUNTY—		
Humble, University 13	765	2960
Independent O&G Co., University 3-A	500	2910
University 5-A	400	2898
Prairie O&G Co., University-Lassiter 5	240	2990
HOWARD COUNTY—		
Magnolia, G. O. Chalk 8	35	1626
Vitek Oil Co., Clay 1	125	1786
PECOS COUNTY—		
Gulf, I. G. Yates 1	7200	1540
Marland Oil Co., Yates 5-A	9600	994
Yates 8-A	400	1432
McMan O&G Co. & Marland Oil Co., Yates 11	25,000	1240
Mid-Kansas-Transcontinental, Smith-Taylor 4	3500	1400
I. G. Yates 7-B	8000	1768
I. G. Yates 8-B	3500	1063
I. G. Yates 15-B	3500	1044
Roxana, Smith 2	480	1578
Tippett 3	4300	1703
Simms Oil Co., Smith 4	†	640
WINKLER COUNTY—		
Gulf, Hendricks 3	1165	2950
Hendricks 6	2520	2900
Magnolia, Hendricks 1	3200	2917
Southern Crude & Dixie Oil Co., Hendricks 4-C-T-67	800	3030

CENTRAL WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
BROWN COUNTY—		
Lamb et al, Gwathney 1	80	1526
McMurray et al, Newton 16	10	1325
Selby O&G Co., Ellis 22	500	1345
Wheelock & Collins, Smith 4	80	1351
Smith 5	540	1348
CALLAHAN COUNTY—		
Prairie O&G Co., Long 1	50	1740
COLEMAN COUNTY—		
Magnolia, W. C. Henderson 1	¶¼	729
EASTLAND COUNTY—		
Latchshaw et al, Harbin 1	25	1520
Prairie O&G Co., Parsons 3	5	1578

Big Tanker Fleet Building For Venezuela Service

Washington, D. C.—Resumption of drilling and construction activity in the Maracaibo Basin, Venezuela, is expected in the immediate future, the Department of Commerce has been advised in a report from the American consul at Maracaibo. Little work has been done by the three large producing companies since last April, it is stated.

Transportation difficulties are somewhat relieved by recent tanker additions, one American company having received three tankers since April, with six more under construction, and another company having six tankers under way which will be ready for delivery within the next six months. A Dutch-English company has seven tankers building or on the way to the lake, and an English company is building three tankers. It is probable that by next April these 25 tankers, each carrying from 15,000 to 17,000 barrels of oil, will be in service, permitting the additional exportation of 125,000 barrels a day.

The additions to the tanker fleets premitted expansion of production to 13,946,139 barrels in the third quarter of 1927, compared with 8,438,727 barrels during the corresponding period last year. The exportation of 5,069,044 barrels in September was the heaviest in the history of oil development in the Maracaibo district, but it is considered probable that the monthly exportation now will remain above 5,000,000 barrels, unofficial figures placing the October exports at more than 6,000,000 barrels.

Government Lands Yield Less Oil During Year

Washington, D. C.—Petroleum production from public lands during the fiscal year ended June 30, last, totaled 25,646,101 barrels, a decline of approximately 4,000,000 barrels from the preceding year and nearly 14,000,000 barrels below the high production of 39,437,658 barrels in 1924, it is disclosed in the annual report of the Geological Survey.

The royalty oil accruing to the government from this production was 3,562,124 barrels, as compared with 4,431,563 barrels in 1926 and 7,872,073 barrels in 1924. The royalty value of oil for the year was 5,741,486, of gas $91,795 and of gasoline $173,173, a total of $6,006,455. The total value in 1925 was $8,199,439 and in 1924 it was $12,192,204.

Oil production on the naval reserves during the fiscal year totaled 12,725,365 barrels, against 12,755,382 barrels in 1926, the royalty oil totaling 2,902,244 barrels, against 2,779,100 barrels. Of the 1927 production, 12,358,315 barrels was in California and 357,049 barrels in Wyoming. The royalty value of the navy oil was $3,175,882, of gas $110,204 and of gasoline $169,644, a total of $3,455,730, against $3,577,386 in 1926.

Since enactment of the leasing law in 1920, petroleum production on the public lands has totaled 173,694,931 barrels and on the naval reserves 65,886,905 barrels.

Shut Down Wells on Navy Lands to Conserve

Washington, D. C.—The shutting down of all government wells on the naval reserves is planned by the Navy Department in the interests of conservation, it is disclosed by the annual report of Secretary of the Navy Wilbur, just made public. All wells on the land in Naval Reserve No. 1, which had been in litigation were shut down in April, and it is expected to keep them shut down indifinitely in order to conserve as much oil as possible in underground storage for as long a time as possible and until it can no longer be readily obtained elsewhere.

Arrangements were made, the report states, whereby either offsetting Navy wells of adjoining operators were also shut down, or agreements were entered into whereby the adjoining operator agreed to pay the government an additional royalty on any increased production due to the shutting down of the navy wells. The department expects similarly to put into effect a similar plan on Naval Reserve No. 3, upon its return to the navy by the receivers.

"The shutting down of producing wells in the naval reserve," it is declared, "has given an excellent opportunity to study the effect of the new policy of conservation, and it is not too much to say has already justified that policy, particularly in the event of agreements for compensatory royalty from adjoining wells in lieu of offsetting wells in the reserve."

New Osage Pool

Tulsa.—Indications of a new pool were strong late last week when George Parker's No. 1, in the northeast corner of section 20-25-7, Osage County, showed oil of 41 gravity from the Burgess sand found at 2660-63 feet. The well was shut down pending laying of pipe connections before drilling further into the sand.

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PERMITS GRANTED FOR NEW WELLS

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week ending Dec. 10	Previous week	Total this month	Total this year	This week last year	This month 1926	Total same date 1926	Year total 1926
Arkansas	12	4	16	320	9	14	1,022	1,046
California	30	36	66	1,138	24	55	1,348	1,389
Louisiana	20	18	38	779	19	40	1,422	1,463
Kansas	22	18	40	909	29	56	1,815	1,90*
Oklahoma	71	55	126	3,533	84	172	5,415	5,584
Texas	195	139	334	8,329	231	390	12,534	12,978
Mountain States	..	..	..	431	4	19	747	*794
Totals	350	270	620	15,439	400	746	24,303	25,159

*First four months of 1926 not included.

OKLAHOMA

CARTER COUNTY—Simpson & Fell, Crockett 1, ne c se, 22-1s-3w. Merrick et al, Denny "B," se nw sw, 20-1s-3w.

CREEK COUNTY—H. U. Bartlett, McIntosh 1, ne c nw nw, 28-18-9e. Continental Oil Co., Strip 1, sw c nw nw, 25-18-11e. Burlingame & Sharp, Miller 14, c sw nw, 13-19-8e. Steinberger & Smith, Smiley 2, c nw ne, 19-19-8e. Page Bros., Bishop 3, ne c sw sw, 13-17-8e. Olean Pet. Co., J. Lewis 1, se c nw, 10-15-8e.

GRADY COUNTY—Carter Oil Co., W. Tims 1, sw c ne, 17-4n-6w; McCaughtry 4, sw c nw nw, 26-5n-8w.

HUGHES COUNTY—Winkler et al, Tiner 1, c se sw, 31-5n-9e.

JEFFERSON COUNTY—Skelly Oil Co., Ryan 2, sw ne se, 23-6e-6w. Heydrick et Hivick, Lahman 1, se c sw se nw, 17-7s-5w.

KAY COUNTY—Harris & Haun, Bechtel 1, c nw se, 22-29-1w. Carter Oil Co. et al, Shimp 6, c sw sw, 17-29-1e. Greer & Walters, Skein 1, c se sw, 19-29-1e. Blackwell O. & G. Co., Athey 3, se ne se, 35-28-1w. Greer et al Lane 1, se ne ne, 30-28-1e; Koehler 1, c se ne, 30-28-1e. Waggoner et al, Fruits 1, nw ne ne, 3-25-2w. Marland Oil Co. et al, Miller 2, ne c sw, 9-25-2.

MUSKOGEE COUNTY — Sioux Oil Co., Bradshaw 1, ne c se nw ne, 24-13-18e. Indian Capital Oil Co., Smith 1, ne c nw se ne, 7-14-19e. W. H. Metzger et al, Towlot 1, sw c se, 34-15-18e. Denton & Marshall, Jefferson 3, ne c se, 32-15-15e. P. Boyle et al, Lowery 1, cwl nw sw, 9-15-15e; Barnett 4, c ne se, 8-15-15e.

OKFUSKEE COUNTY—W. L. Umburm, Tiger 2, cnl ne nw, 2-10-11e; Tiger 1, nw se nw, 2-10--1e. Atlantic Oil Prod. Co., Robinson 1, c nw sw, 12-10-11e.

OKMULGEE COUNTY—Sunray Oil Corp., Cooper 1, ne c nw, 36-16-13e. Papoose Oil Co., Francis 2, sw c se, 25-16-13e. M. T. C. Oil Co., Cooper 1, se c sw, 25-16-13e. F. A. Roberts, Rentie 4, csl se nw, 18-14-15e. F. Henthorn, Rentie 6, ne c sw ne, 18-14-15e. Richardson et al, H. Barnett 4, c sw sw, 6-14-15e. Carr Peterson, E. Ward 4, ne c nw sw, 9-15-14e. Transcontinental Oil Co. et al, E. Deere 2, cwl ne sw, 9-15-13e.

OSAGE COUNTY—Devonian Oil Co. 3, se ne ne, 33-21-10e. Balt Brown Co. 2, ne c sw, 3-26-6e.

PAYNE COUNTY—Magnolia, Jennings 1, sw c nw, 10-18-5e.

PONTOTOC COUNTY — Whitney et al, Shields 2, sw c se, 20-5n-8e. La. Oil Ref. Co., Perry 10, nw c, 20-5n-8e; Perry 7, sw c nw, 20-5n-8e; Perry 12, ne c, 19-5n-8e; Harjo 7, nw sw sw, 17-5-8e; Harjo 8, sw c, 17-5n-8e. Max Westheimer, Milner 1, se c, 8-5n-8e. American O. & R. Co., Mercer 1, c e½ se, 8-4n-6e. Homa Okla Oil Co., McCall 8, nw ne se, 17-5n-8e; McCall 6, sw c ne, 17-5n-8e; McCayy 7, se sw ne, 17-5n-8e.

POTTAWATOMIE COUNTY — Magnolia, Risenhoover 2, ne se ne, 14-7-4. Gypsy Oil Co., McGee 2, nw sw ne, 23-7-4e.

SEMINOLE COUNTY—Magnolia, Rhoades 3, sw nw sw, 12-8-6. Gypsy Oil Co., Henderson 2, ne c, 13-8-6. I. T. I. O. Co., Goforth 8B, ne c nw ne, 15-8-6. T. B. Slick, Coker 1, ne c sw, 31-8-6; Boebelt 1, nw ne se, 12-6-6e. La. Oil Ref. Co., Hulwa 1, sw c nw, 8-5n-8e; Punluste 1, sw c, 8-5n-8e.

STEPHENS COUNTY—Schermerhorn Oil Co., Shields 2, se ne sw, 13-1s-4w. Goline Oil Co., Malechi 3, ne nw ne, 31-1n-8w. Tom Medlin, Taliaferro 7 "B," se c sw, 27-1s-8w. Owen & Wood, Massey 7, cnl s½ se sw, 12-2s-8w.

TULSA COUNTY — Transcontinental Oil Co., Agent 1, se c nw ne, 8-16-14e. Sheridan Co., Squire 2, cnl nw se, 8-16-14e. Savoy Oil Co., Morton 1A, sw c nw nw, 12-16-12. E. B. George, Brown 1A, nw c sw, 7-17-13e.

WAGGONER COUNTY—Peterson & Young, Black et al, Oswalt 1A, nw c sw sw, 6-17-13e. J. Adams 1, c se nw, 23-16-16e. M. B. Flesher, Johnson 1, c ne, 18-17-15e.

KANSAS

COWLEY COUNTY—Trees et al, Dickerson 2, se c sw ne, 30-30-3e; Hittal 1, sw c se ne, 21-31-4e; Estus 1, se c nw, 12-32-6e. Barnsdall Oil Co., Roberts 1, ne c se ne, 7-33-3e. Lewis & Hollis Bros., Newman 1, sw c se, 35-43-3e. Brady Bros., Koestler 1, se c nw nw, 35-34-3e.

GREENWOOD COUNTY—Charles Christie, Christy 1, sw c nw, 31-24-13e. Perkins et al, Cox 1, ne c sw se, 15-25-11e. Empire O. & R. Co., Kolb 1, nw c ne, 15-25-13e. C. A. Devine et al, Bradford 1, sw c ne, 22-26-11e.

LYONS COUNTY—Bason et al, Elrod 1, ne c, 36-21-11e.

MARION COUNTY—T. C. Johnson et al, Thompson 1, sw c ne, 26-17-4e.

RUSSELL COUNTY—Wilcox Oil Co., C. A. Mermis 3, se c, 18-12-15w.

SHERMAN COUNTY—Hannsen et al, Murray 1, ne c sw nw, 22-7-40w.

SUMNER COUNTY—Jarvis et al, Scroggins 2, Midland right-of-way, Oxford Townsite, 14-32-2e. Roxana Pet. Corp., Scroggins 1, track 5, City of Oxford, 14-32-2e; Emrich 5, sw c nw se, 14-32-2e; Buffington 2, Out Lot 9, 14-32-2e. La Robb Oil Co., Buffington 2, City of Oxford, 35 ft e Midland right-of-way, 14-32-2e. Roxana Pet. Corp., Rothwell 1-A, se c ne sw, 14-32-2e. Derby Oil Co., Burket 2, blk 87, Oxford Townsite, 14-32-2e.

WOODSON COUNTY—Young et al, Otto 1, sw c nw nw, 21-23-14e.

CALIFORNIA

BREA-OLINDA—Union Oil Co., Stearns 71, 1-3-10.

BELRIDGE—Carneros Oil Co., 83, 30-8-1.

GOLETA—Barnsdall Oil Co., Edwards 2, 1-4-30.

HUNTINGTON BEACH—Deuol Pet. Co., 1, 36-5-11. M. J. Pettijohn 1, 10-6-11.

KERN FRONT—Standard Oil Co., 3 21-28-27. General Pet. Corp., Sill 30, 26-28-27.

LONG BEACH—Union Oil Co., LBC 17, 30-4-12. George F. Getty, Inc., LB 18, 30-4-12. General Pet. Corp., Signal 2, 19-4-12; B. & D. 3, 19-4-12. Richfield Oil Co., Haas 17, 30-4-12; Haas 15, 30-4-12. Travis Drilling Co., Sales 2, 30-4-12; Travis 2, 29-4-12. A. T. Jergins Trust 23, 19-4-12; 22, 19-4-12. Bush-Voohis Oil Co., 22, 19-4-12.

LOS ANGELES COUNTY—Otis G. Andrews & Sons, 1, 28-8-13.

MIDWAY—Standard Oil Co., 106, 33-21-24.

RICHFIELD—Union Oil Co., Stern 12, 33-3-9; Yorba Linda Group 17, 34-3-9.

RINCON—E. J. Miley, H. & H. 1, 17-3-24; H. & H. 2, 17-3-24.

SANTA CLARA COUNTY—Continental Oil Co., 2, 11-11-4.

SOUTH MOUNTAIN—Union Oil Co., C. & S. 2, 13-3-21.

TEMBLOR—Herbert Moore 1, 11-29-20.

VENTURA—Associated Oil Co., V. L. & W. 4, 23-3-23. Shell Co., Taylor 26, 28-3-23. Standard Oil Co., S-C 1, 15-2-22.

ARKANSAS

COLUMBIA COUNTY—Sunny Jim Oil Co., Runyon 1, 3-16-21, 660 ft n and 360 ft w of sec. Van Hagen Synd., Pickler 1, 19-19-22, 300 ft s and 300 ft w of nec sw se.

UNION COUNTY — Grimes Bros., Van Hook 9, 7-18-14, sec se ne. E. M. Jones, Crain 2, 2-17-14, swc ne se; Crain 3, 2-17-14, 200 ft s and 200 ft e of nwc ne se; Crain 4, 2-17-14, 200 ft s and 200 ft w of nec ne se. Ohio Oil Co., Crain 7, 1-17-14, 200 ft s and 200 ft e of nwc nw sw; Goode 1, 2-17-14, 200 ft n and 200 ft w of sec nw se; Goode 2, 2-17-14, 200 ft s and 200 ft w of nec nw se; Rick Pumphrey 2, 2-17-14, 200 ft s and 200 ft e of nwc se se; Rick Pumphrey 3, 2-17-14, 200 ft s and 200 ft w of nec sw se. Pitcher & White, Kinard 1, 17-19-15, sec sw ne.

LOUISIANA

BOSSIER PARISH—J. S. McCullough, Shreveport, Hodges 4, 25-16n-12w, 250 ft s and 338 ft e of center; Hodges 5, 25-16n-12w, 650 ft s and 438 ft e of center.

CADDO PARISH—Arkansas Natl. Gas Co., Shreveport, Alexander 1, 20-16n-15w, 660 ft n and 657 ft w of sec s½ of nw. Dixie Oil Co., Inc., Shreveport, D. A. Huckaby 1, 33-22n-16w, 200 ft s and 200 ft e of center. J. L. Ferguson, Waskom, Texas, Z. Abney 2, 7-17n-16w, 1488 ft s and 445 ft e of nwc. Standard, Shreveport, J. J. Hart 16, 34-21n-16w, 625 ft s and 150 ft w of nec nw. Standard Oil Co. of La., Shreveport, W. P. Stiles et al 190 (Corrected lcn), 27-21n-16w, 74 ft n and 101 ft w of sec ne of sw.

CAMERON PARISH—Yount-Lee Oil Co., Beaumont, School 7, 16-12s-10w, 2425 ft n and 1400 ft w of sec.

DE SOTO PARISH—F. R. Foster, Shreveport, W. C. Nabors 1, 7-10n-12w, 330 ft n and 330 ft w of sec.

GRANT PARISH—Dr. Geo. J. Sabatier, New Iberia, Calhoun 1, 4-7n-4w, 350 ft n and 175 ft e of sw cor of ne¼ of se¼.

JEFFERSON DAVIS PARISH — Eunice-Welsh Oil Co., Eunice, Walshe 1, 21-9s-5w, 300 ft n and 400 ft w of sec.

LA FOURCHE PARISH—Gulf, Houston, Mrs. W. H. Stark et al 2, 71-15s-15e, 2100 ft e and 250 ft s of nwc.

MOREHOUSE PARISH—Chas. G. Bennett, Monroe, Davis 1, 21-20n-4e, 660 ft n and 274 ft w of sec. G. E. Jordan, Monroe, Southern Carbon Co. 1, 14-20n-4e, 10,185 ft w and 1980 ft s of nec sec 13 in sec 14.

OUACHITA PARISH—Jordan Drilling Co., Monroe, Slagle 1, 48-18n-4e, 400 ft w and 56 ft s of nwc sec 47 in sec 48.

RICHLAND PARISH—Moody & Seagraves, Houston, La Fleur 1, 18-16n-6e, 1010 ft s and 506 ft e of nwc. Nat. G. & F. Corp., El Dorado, Ark., Sartor-Phillips 1, 9-16n-6e, 1320 ft s and 640 ft e of nwc e½ sw. Note & Meredith, Tr., Monroe, Boughton 1, 4-15n-6e, 1980 ft e and 660 ft n of swc nw. Ruston Drilling Co., Ruston, Sartor 1, 17-16n-6e, 1520 ft e and

700 ft n of swc. Southern Carbon Co., Monroe, Sartor 3, 18-16n-6e, 660 ft n and 660 ft w of sec sw.

SABINE PARISH—William G. Doern, Milwaukee, Wis., Pickering 1, 17-4n-11w, 200 ft n and 200 ft e of swc se nw.

TEXAS

ARCHER COUNTY — Murchison Oil Co., Wichita Falls, Cowan 2, blk 18, J. C. S. L. sur, 150 ft from s and w lines. Empire G&F Co., Wichita Falls, Wilson 1, S 111, Amer. Trib. sur, 1532 ft from n and 150 ft from e line. Staley, Wynne & Co., Wichita Falls, Kendall 1, blk 97, T. Toby sur, 150 ft from n and w lines. Texas Co., Wichita Falls, Seay 1, blk 110, H. S. C. R. sur, 150 ft from n and 1866 ft from w line. Rhader & Carey, Wichita Falls, Farmer 3, J. Poitevent sur, 150 ft from s and e lines. Western Oil Sales Corp., Wichita Falls, Priedaux 9, A. McMullen sur, 600 ft w of 6. Madden & Hunt, Olney, Hausler 1, J. Poitevent sur, 150 ft from n and 1170 ft from w line. Harry Hines, Wichita Falls, Farmer 2, S 17, blk 18, Anderson sur, 600 ft from s and e lines. Lee Wilson, Wichita Falls, Farmer 2, J. Poitevent sur, 150 ft from s and w lines. J. M. Seaberry, Holliday, Perkins 2, S 22, blk 3, D. C. S. L. sur, L. T. Burns, Wichita Falls, Fee Lb, blk 27, J. W. Harris sur, 443 ft from e and 150 ft from n line. Texas Co., Wichita Falls, Farmer 2, blk 17, Anderson sur, 600 ft from s and e lines.

BROWN COUNTY — Goldenrod Oil Co., Dallas, Whidden, 10, blk 52, W. Irion sur, 180 ft s of 8. Atlantic Oil Prod. Co., Dallas, Tullos 1, S 43, T&NO sur, 150 ft from s and w lins. Hammon & Garrett, Wichita Falls, Allen 1, S. Waugh sur, 150 ft from n and e lines. M. Curtis, Fort Worth, Fuller 1, No. 41, A. D. Neill sur, 150 ft from s and w lines. Cranfil & Reynolds, Cisco, Smith 19, S 3, SA&MG sur, e of 18. Senior Pet. Co., Oklahoma City, Banker 1, blk 10, A. White sur, 160 ft from e and 1600 ft from s line. Van Bebber & Lehman, Mercury, Evans 4, J. Woodard sur, 600 ft from e and 450 ft from s line. Selby O&G Co., Tulsa, Ellis 23, S 3, SA&MG sur, 150 ft from e and 450 ft from s line. Phillips Pet. Co., Bartlesville, Okla., Newsom 10, blk 4, SA&MG sur. J. H. Shell et al, Gregory, Shaw 1, No. 50, D. J. Jones sur, 150 ft from e and 450 ft from s line; 2, 300 ft n of 1; 3, 300 ft n of 2.

BRAZORIA COUNTY—Rycade, Houston, Wisdom 21, H. N. Cleveland sur, 2219 ft from e and 1107 ft from s line.

CALLAHAN COUNTY—C. A. Waid, Cisco, Garlitz 1, 2990, TE&L sur, 150 ft from s and w lines. Young Bros. & Alexander, Inc., Fort Worth, Wheeler 1, S 119, BBB&C sur, 160 ft from e and 150 ft from s line. Williams 6A, S 1, blk E, T&P Ry sur, 300 ft n of 27. W. C. Mee et al's Abilene, Snyder 5B, S 4, T&NO sur, 150 ft from s and w lines. M. D. Heist, Putnam, Hughes 8, S 6, D&D Asy sur, 300 ft e of 4. Tollett & Graham, Wichita Falls, Alvord 2, S 76, Bayland Asy sur, 600 ft n of 1.

COLEMAN COUNTY—W. A. Gray, Coleman, Hofner 1, No. 739, A. Quigley sur, 200 ft from n and 300 ft from e line. Philmack & Fleeger, Coleman, Williamson 1, blk 101 M. Hunt sur, Virgil Ledford, Santa Anna, Erwin 6, S 751, blk 6, 177 ft from w and 493 ft from s line. Slaughter & Fowler, Brownwood, Idol 1, S 266, H. R. Starkweather sur, 150 ft from w and 300 ft from s line.

EASTLAND COUNTY—Parry Oil Co. of Texas, Fort Worth, Anderson 2, G. E. Moore sur, 150 ft from e and 200 ft from s line. Gulf Prod. Co., Fort Worth, Fox A1, S 67, McL. C. S. L. sur, 107 ft from e and 605 ft from s line. E. M. Thomasson & Co., Inc., Denver, Colo. Cisco Falls Oil Co., Cisco, Rump 1, S. J. Robinson sur, 350 ft from s and w lines. Gulf, Fort Worth, Fox 1A, S 67, McL. C. S. L. sur, 605 ft from s and 107 ft from e line.

FORT BEND COUNTY — S. E. Watts, Humble Bldg., Houston, Gulf 2, blk B, E. Drew sur, 50 ft from s and w lines. Navarro Oil Co., Houston, Robinson A 4, H. Shropshire sur, 100 ft from n and 212 ft from e line. Humble, Houston, Sugarland Co. 1, Wm. Stafford sur, 1250 ft from w and 150 ft from s line. Sun Oil Co., Beaumont, Farmer 4, J. Scott sur, 900 ft from s and e lines.

FALLS COUNTY — Groesbeck, Chisum & Reynolds, Mexia, Marlin Natl. Bank 1, L. F. Moore sur, se corner.

FISHER COUNTY—Marland Oil Co., Fort Worth, Lagow 1DD, S 3, blk 22, T&P sur, center of se¼.

GRAY COUNTY — Danciger O&R Co., Wichita Falls, Jackson 5, blk B2, S 88, H&GN sur, 330 ft from ne and 330 ft from sw line. Gulf, Fort Worth, Holmes 2, S 107, blk 3, I&GN sur, 330 ft from s and e lines. Danciger O&R Co., Wichita Falls, Jackson 6, blk B2, S 88, H&GN sur, 330 ft w of center of e line; 7, 330 ft from n and e lines; 8, 330 ft from s and w lines. Texas Co., Wichita Falls, Erwin 1; Saunders 4, J. Eustis sur, 500 ft from n and 1500 ft from w line. Skelly Oil Co., Tulsa, Bradford 1, S 118, blk B2, H&GN sur, 330 ft from n and e lines.

GLASSCOCK COUNTY—Lockhart & Co., Colorado, Roberts 1, S 157, blk 29, W&NW sur, nw corner. Magnolia, Dallas, Roberts 4, blk 29, S 136, W&NW sur, 330 ft e of center of w line; 5, 660 ft n of 4.

HOWARD COUNTY—Sun Oil Co., Dallas, Settles 1, S 135, blk 29, W&NW sur, 330 ft from s and e lines. Lee & Neely, Colorado, Hyman 1, S 61, blk 29, W&NW sur, 330 ft from s and e lines. Group I Oil Corp., Big Lake, Settles 1, S 159, blk 29, W&NW sur. E. J. Miley, Los Angeles, Calif., Read 1, S 12, blk 31, T&P sur, 1320 ft from n and w lines.

HARRIS COUNTY—Navarro Oil Co., Houston, Cain 4, S 98, J. Hamilton sur, 75 ft from w and 250 ft from s line.

HARRISON COUNTY — Magnolia, Dallas, Vincent 1, R. W. Bedford sur, 150 ft from n and w lines.

JEFFERSON COUNTY—Freeport Sulphur Co., Hamshire, Texas Explo. Co. 5, blk 4, S. Eaton sur, 300 ft s of center of n line. Unity Oil Co., Beaumont, McFaddin 94, P. Humphreys sur, 610 ft from nw and 760 ft from ne line. Sun Oil Co., Beaumont, McLean 18, P. Humphreys sur, 100 ft se of 17. Gulf, Houston, Jack & Duff 7, P. Humphreys sur, 100 ft se of 6; M. McLean A 18, P. Humphreys sur, 176 ft w of 17; 17, 108 ft w of 10. Yount-Lee Oil Co., Beaumont, Gladys 49, J. A. Veatch sur, 180 ft from e and 95 ft from n line; 50, blk 57, J. A. Veatch sur, 180 ft from e and 95 ft from s line; McFaddin 49, blk 1, P. Humphreys sur, 885 ft from e and 895 ft from n line; 50, 1081 ft from e and 888 ft from n line.

JACK COUNTY—Seaboard O&G Co., Wichita Falls, Cullers 3, S 4, S. P. Ry sur, 800 ft from n and 200 ft from e line. C. S. Leidecker, San Angelo, First State Bank 1, S 2, Indianola sur, s central part of lease. Christie Bros., Wichita Falls, Jones 3, S 5, S. P. Ry sur, 300 ft e of 2. Madden & Hunt, Olney, Sloan 5, blk 22, J. W. Williams sur, 600 ft from w and 1500 ft from n line. Dale Oil Corp., Wichita Falls, Hanna 6, 3316, TE&L sur, 1850 ft from e and 131 ft from s line. Bob Elmore, Fort Worth, Jones 1, J. W. Williams sur, 150 ft from n and w lines.

JONES COUNTY—Phillips Pet. Co., Bartlesville, Okla., Vestal 2, S 18, blk 19, T&P sur, ne of 1.

JIM HOGG COUNTY — Magnolia, Dallas, Merchants Bank 33, No. 415, F. M. Brister sur, 400 ft se of 28.

KLEBERG COUNTY — Humble, Houston, Dennett A 4, S 39, blk 2, KT&I sur, 550 ft from n and 150 ft from w line.

LA SALLE COUNTY—L. V. Chenoweth, Los Angeles, Texas, Fee 1, S 58, G. Manchaca sur, n central part of lease.

LIMESTONE COUNTY—Transcontinental Oil Co., Tulsa, Ward 1, P. Varela sur, 500 ft from nw and 450 ft from ne line.

LOVING COUNTY — Associated Oil Co., Hcuston, Tadlock 1, Wm. Duncan sur, 93 ft from n and 50 ft from e line. Hirschfield 1, Wm. Duncan sur, 50 ft from n and w lines.

MILAM COUNTY — Kent-Middleton Ref. Co., Corsicana, Moody 3, T. J. Chambers sur, 150 ft from n and 600 ft from e lines. Davis & Wallace, Cameron, Chandler 1, D. A. Thompson sur, 150 ft from s and w lines; 2, 300 ft n of 1.

MONTAGUE COUNTY—McGinley Corp., Fort Worth, Hinton 1, A. Coats, Cotinental & Bridwell & Heydrick Oil Co., Wichita Falls, Cunningham 1, T. R. Edmondson sur, 150 ft from n and e lines. Bridwell & Heydrick Oil Co., Wichita Falls, Salmon 1, S. Little sur, 1050 ft from n and 150 ft from w line.

MEDINA COUNTY—Witherspoon Oil Co., San Antonio, Redus 3, State sur, 400 ft from n and w lines; Adams 4, E. C. Durst sur, 1000 ft n of 3.

MITCHELL COUNTY — Teas & Healdton Oil Co., Colorado, Mills 1, S 11, J. P. Smith sur, 330 ft from n and w lines.

McCULLOCH COUNTY—J. C. Van Bebber, Mercury, Pumphrey 2, No. 848, 1800 ft from w and 900 ft from n line. W. V. Lanning et al, Brady, Johnson 1, S 239, GH&H sur, sw corner.

PECOS COUNTY — Mid-Kansas O. & G. Co., Tulsa, I. G. Yates 9C, S 60, blk 1, I&GN sur, 1493 ft from n and 330 ft from e line; 15A, S 3A, I. G. Yates sur, 2390 ft from w and 250 ft from s line; 18B, S 61, blk 1, I&GN sur, 1628 ft from s and 742 ft from w line; 19B, 250 ft from n and 2142 ft from w line; 20B, 811 ft from n and 2390 ft from w line; 21B, 811 ft from s and 2390 ft from w line; 22B, 250 ft from s and 2390 ft from w line. Henshaw Oil Corp., San Angelo, Corder 1, S 74, blk 2, CCS&RGNG sur, 503 ft from w and 475 ft from s line. Roxana, South Bend, Tippet 4, S 102, T. C. Ry sur 200 ft from n and 1175 ft from w line; Smith 3A, S 27, GC&SF sur, 330 ft from n and e lines; 4A, 330 ft from n and 1175 ft from w line. Mid-Kansas O&G Co., Tulsa, Smith 7, S 33, blk 194, T. C. Ry sur, 2784 ft from n and 250 ft from w line; 8, 2784 ft from n and 785 ft from w line; 9, 1714 ft from n and 1320 ft from w line; Pryor-Wilson 1, S 3, blk 5, T. C. Ry sur, 230 ft from n and 330 ft from w line; Yates 8C, S 60, blk K11, I&GN sur, 614 ft from n and 330 ft from e line; 7C, 300 ft from n and e lines; 13B, S 61, blk 1, I&GN sur, 2525 ft from e and 200 ft from s line; 14B, 1175 ft from e and 200 ft from s line; 15B, 1650 ft from e and 200 ft from s line; 16B, 2125 ft from e and 200 ft from s line; 17B, 700 ft from e and 200 ft from s line. McMan O&G Co., Tulsa, Yates 13, S 34½, blk 194, GC&SF sur, 275 ft n of center of s line; 14, 660 ft w of 3; Tippett 1, S 108, blk 194, CT&MC sur, 200 ft from n and e lines. California Co., Colorado, Smith 9, S 35, blk 194, GC&SF sur, 566 ft n of 8. Douglas Oil Co., Tulsa, Okla.,, White-Baker 1, S 14, blk 3, T. C. Ry sur, nw corner.

REEVES COUNTY—Grisham-Hunter Corp., Abilene, Sievers 1, S 26, blk 2, H&GN sur, 600 ft from nw and 200 ft from sw line.

PALO PINTO COUNTY — T. G. Shaw, Fort Worth, Marlow 1, S 19, T&P Ry sur, 900 ft from e and 400 ft from s line.

REAGAN COUNTY—Group I Oil Corp., Big Lake, University A7, S 36, blk 9, Univ. Lands sur.

SHACKELFORD COUNTY — Chapman & Spoonts, Fort Worth, Alexander 5, S 15, L. A. L. sur. Humble, Wichita Falls, Davis 4, S 219, E. T. Ry sur, 3660 ft from n and 3644 ft from w line. M. O. Swallow, Albany, Reynolds 1, S 25, blk 11, T&P sur, 660 ft from w and 1170 ft from s line. T. G. Shaw, Fort Worth, Burns 1, S 18, Bayland Asy. sur, 150 ft from s and w lines; 2, 300 ft n of 1; 3, 300 ft e of 1; Reynolds 1, S 69, L. A. L. sur, 570 ft from w and 450 ft from s line; 2, 460 ft from s and e lines; 3, 750 ft from e and 150 ft from s line. Sedwick Oil Co., Cisco, Jenkins 9A, S 69, L. A. L. sur, 300 ft n of 6. R. C. Payne, Breckenridge, Muse 2, 808, TE&L sur, 150 ft from n and 1450 ft from e line. T. G. Shaw, Fort Worth, Burns 1, S19, Bayland Asy. sur, 150 ft from s and e lines; 2, 300 ft n of 1; 3, 300 ft w of 1.

STEPHENS COUNTY — M. K. Lyman, Breckenridge, Curry 1, 3392, TE&L sur, 1000 ft from w and 310 ft from s line. Texas Fidelity Oil Corp., Fort Worth, Cook 1, S 22, blk 6, T&P sur, 1000 ft from e and 1500 ft from s line. T P. Coal & Oil Co., Ranger, Pierce 6, S 92, blk 4, T&P sur, 2000 ft from s and 300 ft from e line.

STARR COUNTY—Kusch Explo. Co., Austin, Doyno 1, No. 75, Camargo sur, 150 ft from n and w lines.

THROCKMORTON COUNTY—Falls Prod. Co., Wichita Falls, Graham 4, 992, TE&L sur, 300 ft s of 3.

WICHITA COUNTY—Madison O&G Co., Forth Worth, Burnett 3, S 7, HT&B sur, 300 ft e of 2. O'Donohoe-Gates Drilling Co., Wichita Falls, Love 2, W. Skennard sur, 330 ft n of 1. Dale & Kempner 5B, blk 17, W. V. F. L. sur, 175 ft from n and 210 ft from w line. J. W. Duncan, Wichita Falls, Jackson 4, blk 2, D. C. S. L. sur No. 4, 300 ft e of 2. Lomax Swanner, Wichita Falls, McCormick 1, blk 6, P. P. C. S. L. sur, 194 ft from n and 564 ft from e line. H. H. Spencer, Burkburnett, George 2, O. Farrish sur, 750 ft from

n and 150 ft from e line. Grayce Oil Co., Wichita Falls, Schmissener 4, blk 73, R. R. V. L. L. G. S. Oil Co., Iowa Park, Boyd 2B, blk 13, J. T. Lewis sur, 150 ft from e and 200 ft from s line. L. G. S. Oil Co., Iowa Park, Boyd 2B, blk 13, J. T. Lewis sur, 150 ft from e and 200 ft from s line.

WILBARGER COUNTY — Waggoner Ref. Co., Wichita Falls, Waggoner C 4, S 44, blk 4, H&TC sur, 300 ft w of 3. Phillips Pet. Co., Bartlesville, Okla., Waggoner T 10, S 44, S 4, H&TC sur, 50 ft s of 8; 11, 433 ft e of 8. Fain-McGaha Oil Corp., Wichita Falls, Waggoner 1, S 24, blk 4, H&TC sur, 150 ft from s and w lines; Waggoner 1, S 17, blk 4, H&TC sur, 150 ft from s and w lines; Waggoner 1, S 49, blk 4, H&TC sur, 1460 ft from n and w lines.

WINKLER COUNTY—Southern C ude Oil Purchasing Co., Shreveport, La., I Hendricks 5C, S 33, blk B5, School sur, 1650 ft from n and 330 ft from e line; I. Hendricks 2, S 33, 330 ft from e and 1650 ft from s line. Atlantic Oil Prod. Co., Dallas, T. G. Hendricks A3, S 34, blk B5, School sur, 330 ft from s and w lines; L. Hendrick F1, S 40, blk 26, 330 ft from n and 990 ft from w line. Roxana, South Bend, I. Hendricks C2, S 29, blk B5, School sur, 330 ft from s and e lines.

WHARTON COUNTY—J. S. Abercrombie Co., Houston, Woytek 2, S. F. Austin sur, 125 ft sw of 3; 3, 175 ft from ne and 50 ft from se line; 4, 300 ft from se and 50 ft from sw line. Weed-Gayle Oil Co., Beaumont, Bay 8, S. F. Austin sur, 65 ft ne of 5.

WEBB COUNTY—Cole Pet. Co., Laredo, Benavides 50A, S 5, blk 7, Cuellar sur, 620 ft from nw and ne lines; 50B, 611 ft from nw and 625 ft from ne lines.

YOUNG COUNTY—E. G. Christie, Olney, Street-Deits 1, 1591, TE&L sur, 450 ft from n and 150 ft from e line. Robert Oil Corp., Breckenridge, Garvey 4, 1802, TE&L sur, 600 ft w and 600 ft n of 2. G. A. Gifford, Clinton Bldg., Abilene, Miller 1, blk 6, A. Rohus sur, 1200 ft from n and 918 ft from e line; 2, 550 ft from w and 800 ft from s line. Pitzer & West, Breckenridge, Thigpen 1, P. Pier sur, 200 ft from e and 173 ft from s line; Hinson 3, P. Pier sur, 480 ft s of 1. McClure 1, 1947, TEL sur, 150 ft from n and e lines. Snowden & McSweeney Co., Fort Worth, Shirley 3, J. Conner sur, 250 ft from w and 750 ft from n line. Kessler & Logan, Okmulgee, Okla., Hensley 1, W. H. Price sur, 150 ft from n and w lines; Hensley 1, A. Chuberg sur, 150 ft from n and 1170 ft from e line.

WILDCATS FROM ALL SECTIONS

SOUTHERN CALIFORNIA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
OLIVE—		
Standard, Olive 1	*	5100

BOYLE HEIGHTS—Haskell M. Greene's P. A. S. F. 1, plug 2450 ft, showing both oil and gas.

CLAREMONT—Claremont O. & G. Co.'s 1, sd 1130 ft.

DAVIDSON CITY—California Well Drilling Co.'s 1, sd 7060 ft.

DOMINGUEZ—Dominguez Extension Oil Co.'s 1, sd 5510 ft.

EL SEGUNDO—Rider Oil Synd.'s 1, sd 2300 ft. Southern Calif. Well Drilling Co.'s Matteson 1, sd 4865 ft.

FAIRVIEW—Petroleum Securities' Fairview 1, dr hard shale 3950 ft.

GARDENA—Circle O. & G. Co.'s Pomeroy 1, sd 4130 ft.

HAWTHORNE—San Clemente Oil Co.'s Hawthorne 1, trying for water shutoff 5535 ft.

HUNTINGTON BEACH — Calnan Pet. Corp.'s S. & W. 1, sd 5107 ft. J. A. Browers' Huntington 1, dr gray sand 5206 ft. Duell Pet. Corp.'s 1, rig. Leo Stein's Huntington 1, sd 5155 ft.

INGLEWOOD—Allenson & Co.'s 1, sd 3500 ft. Hurst Oil Corp.'s Simons 1, sd 3740 ft.

LANCASTER—John B. Harding's La Loma 1, pulling 8¼-in cas 823 ft. Otis Andrews' Lancaster 1, rig.

MAYWOOD—Magnolia Pet. Synd.'s 1, sd 2700 ft.

MONTEREY PARK—Monterey Park Oil Co.'s 1, gas pocket 3107 ft.

MONTEBELLO—Rotary Air Drill Co.'s Germain 1, sd 1400 ft.

NEWHALL—W. W. Stabler's Castaic 1, sd 3408 ft. Thomason & McCoy's S. F. C. 1, sd 1610 ft. James Mayzie's 1, 20-5-17, new lcn.

OLIVE—Standard's Olive 1, abn 5100 ft.

ORANGE—Chas. A. Son's Pinkerton 1, sd 3620 ft.

PLACENTIA—Shell Co.'s Allec 1, dr 5215 ft.

PICO — Associated's Patterson 1, coring 3472 ft.

POTRERO—Associated's Cypress 1, 4¾-in cas set at 5276 ft, td 5408 ft.

PUENTE HILLS—Anchor Pet. Co.'s Hudson 1, sd 2270 ft.

SAN FERNANDO—Shell's Mission 1, coring 4860 ft.

SAN JOSE HILLS—Bardeen Oil Co.'s Didier 3, sd 2255 ft. D. & B. Oil Co.'s Amar 1, sd 4370 ft. Fuller & Gray's Sanchez 1, rig.

SAN JUAN CAPISTRANO—O. K. Carr's Forster 1, sd 4200 ft.

TELEGRAPH CANYON—Quadra Pet. Co.'s M. J. M. 1, sd 4210 ft.

YORBA—Petroleum Securities' Kraemer 1, sd tr 2975 ft. Standard's Y. L. W. 1, dr hard hand 4766 ft.

WATTS—Southwest Pet. Corp.'s Ramsaur 1, sd 4300 ft.

WATSON—White Behr Oil Co.'s Watson 1, dr shale 3355 ft.

MISCELLANEOUS

RIVERSIDE COUNTY—Hemet Pet. Corp.'s Ward 1, 8¼-in cas cmt 1625 ft, td 1640 ft. Trabuco Oil Co.'s 1, dr sandy lime 2988 ft.

SAN BERNARDINO COUNTY — Colton Terrace Oil Co.'s Colton 1, dr 1628 ft. Como Oil Co.'s Cajon 1, sd 2845 ft. Del Rosa Oil Co.'s 2, sd 915 ft. Arrowhead Dev. Co.'s 1, sd 1525 ft. Hesperia O. & G. Co.'s 1A, testing plug 2850 ft, td 3312 ft. H. & P. Oil Co.'s 1, sd 2144 ft. J. W. McPherson's 1, sd 400 ft. Western Pacific Oil Co.'s 3, sd 3000 ft.

SAN DIEGO COUNTY—Cardiff Oil Corp.'s Turner 1, sd 2800 ft. Devenport Dev. Co.'s 1, dr 135 ft. Southern O. & G. Co.'s 1, sd 2450 ft. Torrey Pines Oil Co.'s McGregor 1, sd 480 ft. S. S. Turner's Baler 1, dr 175 ft.

NORTHERN CALIFORNIA

FRESNO COUNTY

N. COALINGA—Superior Oil Co.'s 1, 18-21-17, rig. Fresno-United Oil Co.'s 1, 23-15-18, sd 3960 ft.

KERN COUNTY

BAKERSFIELD — Pacific Eastern Prod. Co.'s K. C. L. 1, dr shale 4718 ft.

BELRIDGE—Zurich Oil Co.'s 1, 18-22-22, dr 2100 ft.

BUTTONWILLOW—Milham Explo. Co.'s Kern 2, rigging rotary. McAdams' 1, 26-29-23, dr 1678 ft.

COMANCHE—Kern 29 Oil Co.'s 1, 29-31-30, sd 2415 ft.

DELANO—North American Cons. Oil Co.'s 1, 5-25-25, sd tr 3675 ft.

DEVILS DEN—Midway Northern Oil Co.'s 1, 25-25-18, co 2410 ft, pulled oil string.

EDISON—General Pet. Corp.'s Kerwin 1, dr out cmt 4006 ft, will test.

FRUITVALE—Pacific Eastern Prod. Co.'s 1, 21-29-27, dr 3200 ft.

GREENFIELD—Mays & Valencia's 1, 31-30-28, rig.

GOULD HILLS—Bomke & Ball's 1, 12-29-20, sd 1345 ft. California-Kentucky Oil Co.'s 1, 8-29-21, sd 1620 ft. Cymric Oil Co.'s 1, 36-28-20, rigging rotary. Exeter Oil Co.'s 1, 1-29-20, pumping 30 barrels 1150 ft. J. F. Harrison's 3, 36-29-20, dr 386 ft. Jackson & Chamberlain's 1, 36-29-20, rigging rotary. Rhoads Oil Co.'s 1, 20-29-21, pumping 8 barrels 1485 ft. Herbert Moore's 1, 11-29-20, sp.

McFARLAND—Superior Oil Co.'s 1, 11-26-27, dr 3300 ft.

McKITTRICK—Abbott Pet. Co.'s 1, 2-30-21, sd 1940 ft. Lacy Esper Pet. Co.'s 1, 18-19-22, sd 3265 ft. McKittrick Hills Synd.'s 1, 18-30-22, changing to cable tools 3250 ft. Ozena Oil Co.'s 1, 27-29-21, sd 1770 ft.

MON BLUFF—Shell's Glide 1, 3-28-28, dr 3768 ft. Union's Tribe 1, 28-27-28, oil sand 1745 ft.

NORTH MIDWAY—Gore Oil Corp.'s 1, 34-30-22, sd 1350 ft. Electric Pet. Co.'s 1, 34-30-22, dr 1678 ft.

NORTH POSO CREEK—Bruce Frame's 1, 18-26-28, dr 1406 ft. General Petroleum's 1, 21-27-28, cmt 11-in cas 1570 ft, td 1720 ft.

SHALE HILLS—Huntington & Hawthorne's 1, 35-26-18, sd 1600 ft. Oildale Oil Co.'s 1, 13-27-28, sd 560 ft.

SUNSET—Raleigh Oil Co.'s 1, 8-11-23, rigging to dr deeper from 2608 ft.

TEMBLOR—Fortuna Oil Co.'s 1, 28-32-23, sd 2650 ft. Salegna Investment Co.'s 1, 36-29-20, 12½-in cas cmt 194 ft, td 300 ft.

TEHACHAPI-MOJAVE — Crusaders Oil Co.'s 1, 21-10-10, oil showings 2365 ft. John B. Harding's 1, 5-10-10, sd 1050 ft. C. R. Asmusson's 1, 23-11-11, sd 1510 ft.

SANTA BARBARA COUNTY

GOLETA—Barnsdall Oil Co.'s Edwards 1, plugged at 2200 ft, will make gas well. California American Holding Co.'s 1, dr 1507 ft. Graham Loftus Oil Co.'s 1, sd 1600 ft. J. J. Reker's Pa Peter 1, dr 1825 ft.

BUELTON—Buttram Pet. Co.'s Odin 1, dr 1350 ft.

ORCUTT—George O. Gorham's 1, lcn.

SANTA YNEZ—San Marcos Synd.'s 1, dr brown shale 3428 ft.

SANTA BARBARA—Twin State Oil Co.'s Modoc 1, sd 180 ft. Channell O. & Dev. Co.'s 1, dr 5984 ft.

SUMMERLAND — Summerland Oil Co.'s Becker 1, trying to locate water 3030 ft.

VENTURA COUNTY

CAMARILLO—Standard's Camarillo 1, fsh for dr pipe 5720 ft.

FILLMORE—Sespe Oil Co.'s Smith 2, sd 4005 ft. Superior Oil Co.'s Sespe 1, rig.

HOPPER CANYON — Bishop-Buckeye's Union 2, sd 200 ft.

MOORPARK—E. A. Parkford's Lloyd 1, rigging rotary 4003 ft. Shell's Berylwood 1, sr 6065 ft.

RINCON—Bankline Oil Co.'s Permit 1, lcn. Chanslor-Canfield Midway's Hobson 1A, plug 6680 ft, td 7002 ft, fsh for swab; Hobson 1B, testing 5740 ft; Hobson C1, dr 1050 ft; Hobson C2, dr 1175 ft; Hobson C3, dr 500 ft. General Petroleum's Ferguson 1, lcn; Hobson A1, rig; Tomson 1, rigging rotary. Miley Oil Co.'s HH1, dr 1235 ft; HH2, dr 200 ft; HH3, lcn. Pan-American Pet. Co.'s State 1, trying to locate water 3220 ft; State 2, dr 300 ft; Hobson Fee 1, dr 2466 ft; Hobson Fee 2, dr 2120 ft; Hobson Fee 3, dr 2476 ft; Hobson Fee 5, lcn. Pet. Exploration Co.'s Hawkins 1, rigging rotary. Montecito Oil Producers' Cota 1, dr 3535 ft. Scott Pet. Properties' Sincon 1, dr 1000 ft.

SANTA PAULA—Meriam Pet. Co.'s Anlauf 1, pumping some oil 1330 ft. W. W. Bryant's Anlauf 1, dr brown shale 1386 ft.

STRATHERN—Shell's Strathern 1, rigging rotary, td 725 ft.

SATICOY—Standard's Saticoy 1, dr 265 ft.

SOUTH MOUNTAIN—Ring Pet. Co.'s Converse 1, sd 3950 ft.

SULPHUR MOUNTAIN—Geis & Bradford's 1, 21-4-22, hole deepened to 2140 ft, good oil sand.

OJAI-CASITAS—Hanson & Marshall's 1, 11-3-25, rig. Miley Oil Co.'s Casitas 2A, dr 765 ft.

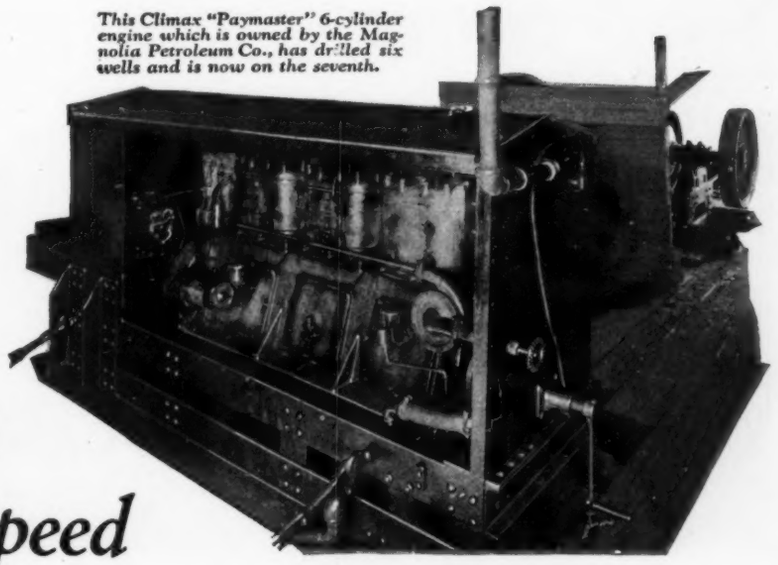
VENTURA—Associated's Dabney-Lloyd 1, testing for production 6917 ft.

MISCELLANEOUS

COLOUSA COUNTY—Continental Oil Co.'s 2, 31-18-4, re-dr 3700 ft, td 3800 ft.

KINGS COUNTY—Associated's Smith 1, 12-23-18, sd 2045 ft. Bolsa Chica Oil Co.'s 1, 30-23-19, sd 3500 ft. General Pet. Corp.'s 2, 22-16-18, dr 5306 ft. Milham Exploration Co.'s 1, 2-22-17, dr 5921 ft. Monocline Dev. Co.'s 1,

A New Drilling Unit with New Features —*New Drilling Speed*



This Climax "Paymaster" 6-cylinder engine which is owned by the Magnolia Petroleum Co., has drilled six wells and is now on the seventh.

The new Climax, "Paymaster," 6-cylinder drilling engine is the most modern power unit on the market today.

6-Cylinder Performance

The new Climax, "Paymaster," 6-cylinder engine hums along constantly. You get 6-cylinder performance for normal drilling, for pulling casing, for pulling pipe, or for pulling the bailer.

Light in Weight

The low weight per H. P. of this engine plus skid mounting make it just as easy to move as most 4-cylinder engines, and far easier to move than steam engines.

A Belt Take-up

With the specially built turnbuckles it is easy to anchor the engine—and it is easy to move the engine to take up the slack in both the clutch and band wheel belt. This saves time in cutting and lacing the belt.

Burns Gas or Gasoline

The new Climax carburetor burns gas or gasoline. One throw of the little control lever is all that is necessary—there is nothing whatever to be put on or taken off for the change.

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The Climax, "Paymaster" Six, is equipped with the new Climax Electric Starter. Cranking is eliminated — merely push the starter button. The engine can be shut down to save fuel when not in use.

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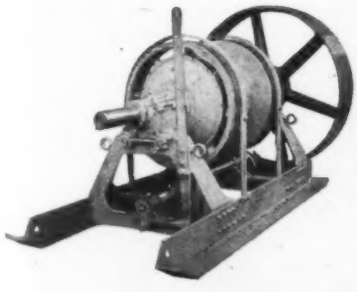
No other engine on the market today is equipped with two sets of spark plugs—one from magneto and one from battery — each independent. No other engine can give you this reliable service.

Instrument Board

The fully equipped instrument board makes things handier and speeds up operations.

CLIMAX ENGINEERING COMPANY, 75 W. 18th Ave., Clinton, Iowa



This is the new Climax Reverse Clutch built especially for handling the steady flow of power from the Climax "Paymaster" 6-cylinder engine. It has five distinct operating motions all controlled by one simple lever. It is light in weight as is the Climax 6-cylinder engine, and it's equally easy to move.

CLIMAX Trade Mark Reg. U. S. Pat. Off.

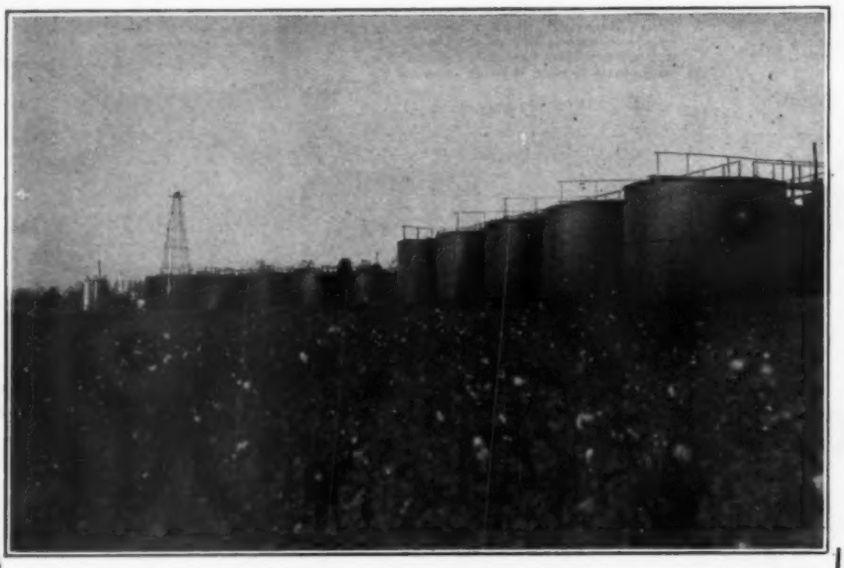
Reliable Cable Drilling Units

DISTRIBUTED BY

THE NATIONAL SUPPLY COMPANIES

NS CO

Say you saw it in The OIL WEEKLY



SUPREME IN ENDURANCE
—*At No Extra Cost*

MALONEY Bolted Steel Tanks are supreme in endurance because they are made of rust-resisting Keystone Copper Steel. Copper Steels of Keystone specifications have proven superior in endurance to all other sheet steels, in tests conducted by the American Society for Testing Materials. Users of Maloneys pay nothing extra for this extra durability.

MALONEYS are rendered vapor-tight to an exceptional degree by our patented "crimp," which allows parts to fit with hair-line accuracy, and by the use of our special composition packing and our Gaso Cement. Seams are rigidly reinforced. Our special 90,000-lb. bolts, of 35% greater tensile strength, are now furnished at no extra cost. Large cleaning out plates set flush with bottoms. Maloney Special Pearl Gray Paint reflects heat and reduces evaporation. The best obtainable valves and thief-hatches are standard equipment.

"Alone in Quality"

THE MALONEY TANK MFG. CO.
TULSA, OKLAHOMA

Distributors at All Principal Petroleum Points.

Sizes: 12 to 5,000 Barrels.

Packed in Steel-Bound Crates for Export.

Howell Aluminum "3 in 1" Vacuum Pressure Valve and Thief Hatch—The BEST and LATEST Deck Equipment—POSITIVE Safety

MADE OF KEYSTONE COPPER STEEL — MALONEY PATENTED BOLTED COPPER-STEEL TANKS — MADE OF KEYSTONE COPPER STEEL

MALONEY ALONE

7-21-21, dr 4211 ft. South Coalinga Oil Co.'s 1, 3-24-19, 8¼-in cas cmt 2888 ft.

MADERA COUNTY—Fort Wayne-Madera Synd.'s 1, 22-10-17, pulling dr pipe 2252 ft.

SAN LUIS OBISPO COUNTY—Elberta Midway Oil Co.'s 1, 5-32-13, dr 3122 ft. Miley Exploration Co.'s 1, 15-29-17, dr 1530 ft. Paso Robles Oil Co.'s 1, 34-27-13, sd 1550 ft. Richfield Oil Co.'s 1, 10-29-17, dr 2280 ft. San Luis Synd.'s 1, 29-31-13, dr shale 1814 ft. Texas Pacific Oil Co.'s 1, 25-32-14, fsh for 10-in cas 2270 ft. Standard Engineering Co.'s 1, 27-27-11, dr brown shale 2536 ft. Union's 1, 34-32-15, lcn. Waklin Pet. Co.'s 1, 27-27-11, dr brown shale 2566 ft.

SAN MATEO COUNTY—Shell's Cowell 1, 8-6-5, dr 5060 ft.

SONOMA COUNTY—Shell's Murphy 2, 8-5-7, dr 1960 ft.

TULARE COUNTY—Shell's Federal Explo. 1, 15-22-24, dr 5516 ft. Birch Oil Co.'s 1, 13-21-26, dr 2663 ft. Ducer Drilling Co.'s 1, 29-23-27, sd 4160 ft. J. E. Neame's 1, 24-17-24, sd 2-25 ft.

SOUTHWEST TEXAS
Completions

Company, Well and Location	Initial Production Bbls.	Depth
BROOKS COUNTY—		
The Texas Co., Lasater 3, Gyp Hill..	*	4878
KINNEY COUNTY—		
Havelin Oil Co., Weatherby 1, sec 26, blk 5	*	4375
WEBB COUNTY—		
O. W. Killam, Benavides 8	*	....

DUVAL COUNTY—Associated Oil Co.'s Sutherland 1, dr. R. Driscol's 8, sec 23, dr around 1200 ft. O. W. Willam's Lopes 3, 4, 5 and 6, dr. National Oil Co.'s Ball 1, lcn. O'Hern & Seacord's Schlessinger 1, dr.

JIM HOGG COUNTY—Andrews Pet. Co.'s M. S. Bank 1, dr; Palacious 1, dr. Bagger & Maddox's Nos. 1, 2, 3 and 4, sur 81, dr. Cole Pet. Co.'s 33, dr. Miller Shaw's Jones '. dr 1000 ft. Moody Oil Corporation's 1, blk 29, dr. Paesano Oil Co.'s Las Vivorcitas Grant 1, dr 2750 ft. Simms Oil Co.'s Leyendecker 1, dr. A. & M. Stacy's 1, dr.

WEBB COUNTY — Associated-Carson's Webster 2, dr. J. M. Basharaus' Espjo 1, dr. Cole Pet. Co.'s No. 36, std at 5525 ft. Houston Oil Co.'s Benavides 1, dr; Cuellar 1, dr. O. W. Killam's Puig 1, dr; Benavides 8, abn. T. P. Morgan's No. 2, blk 23, sec 335, dr. Nelson Drilling Co.'s Puig 1, dr. Newton Drilling Co.'s Bruni 2, dr. Rio Grande Oil Co.'s Santa Thomas Grant 1, dr.

ZAPATA COUNTY—Henne, Winch & Farris' Martinez 1, dr. Hill et al's Villa Grant 1, dr. O. W. Killam's Lopez 1, tested salt water at 2036 ft. No. 1 Benavides dr around 1600 ft in gumbo.

SOUTH LOUISIANA
Completions

Company, Well and Location	Initial Production Bbls.	Depth
ASCENSION PARISH—		
Gulf, United Lands Co. 3, Sorrento Dome	*	2050
LA FOURCHE PARISH—		
Gulf, Stary et al 1, Thibodaux	*	1400
ST. MARY PARISH—		
La. Land & Explo. Co. West Cote Blanche 1	*	2640

ASCENSION PARISH—Gulf's United Lands Co. 3, Sorrento Dome, abn at 2000 ft; United Lands Co. 4, lcn.

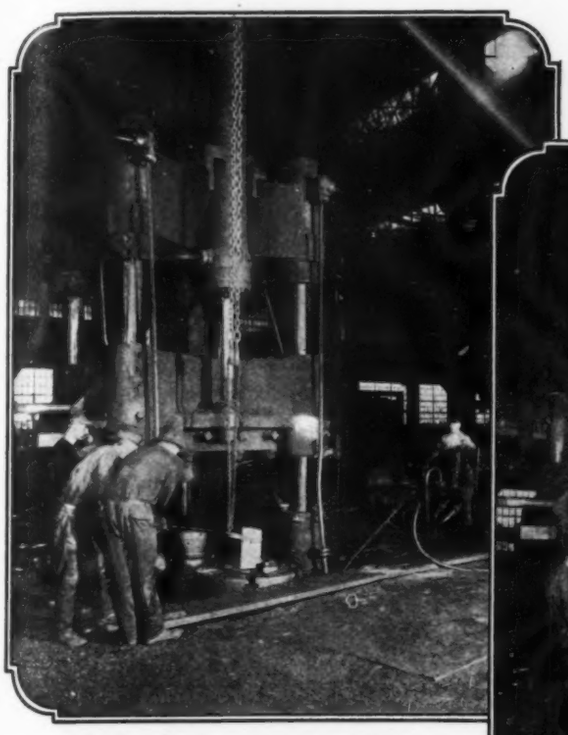
CAMERON PARISH—Pure Oil Co.'s Sweet Lake 3, Sweet Lake, fsh 5897 ft; Sweet Lake 4, Sweet Lake, fsh 5141 ft; Sweet Lake 5, Sweet Lake, sd 5140 ft, wtg on orders. La. Land & Explo. Co.'s Calcasieu Lake A-1, set 9¼-in cas at 903 ft. Calcasieu Oil Co.'s Olevia 1, Kelso Bayou, dr 1655 ft; Watkins 1, Kelso Bayou, rig up. Yount-Lee Oil Co.'s School Land 1, lcn.

IBERIA PARISH—La. Land & Explo. Co.'s Vermillion Bay 2, getting ready to set surf cas 408 ft.

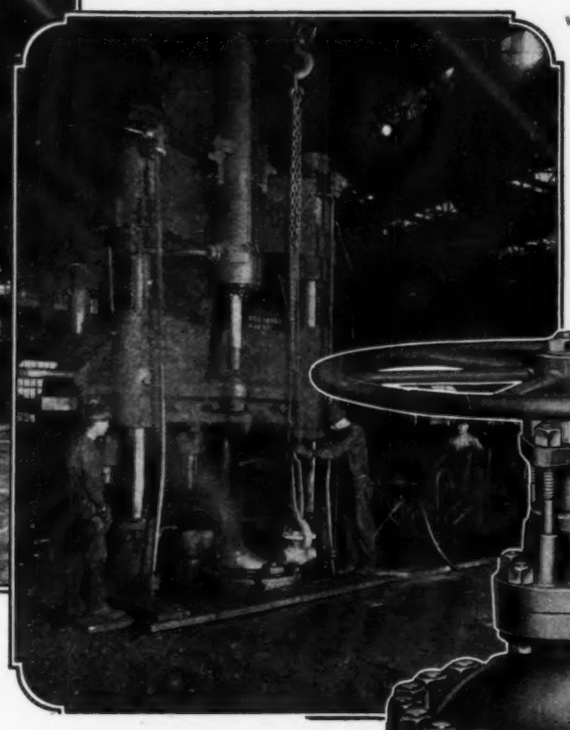
IBERVILLE PARISH—Roxana's Wilbert 1, White Castle Dome , mixing mud, td 1050 ft.

JEFF DAVIS PARISH—Estropal Oil Co.'s Le Doux 2, sd 2980 ft. John Carrodine et al's Walsh 1, Welsh, sd 1355 ft.

LA FOURCHE PARISH—Gulf's Stark et



Removing the 4" Forged Steel Valve Casing from the dies of the 1000-Ton Press.



Placing a 4" Valve Casing Billet in the die of the 1000-Ton Press.

The New Darling FORGED STEEL DRILLING GATE VALVE in the making

This FORGED STEEL DRILLING GATE VALVE—newest member of the Darling family—has been designed and built with one idea—to stand the terrific punishment of enormous pressures, continuously applied, under any and all conditions of oil field production.

In high pressure fields you're dealing with the unknown and the unexpected. No one can tell just what the pressure may be. No one knows just what may result should the valve fail to hold.

The result is a valve that works smoothly, perfectly, instantly, permitting close regulation and positive, sure control of flow—a steel valve with none of the hidden inperfections or weakness of the cast valve—and ten times the structural strength.

When you think of valves—think of DARLING. Put the new DARLING FORGED STEEL DRILLING GATE VALVE on the job, and be *permanently* insured against production losses.

Can be furnished in Inside Screw, Stationary Stem Type, in Screwed Ends, Flanged Ends and Flanged Ends with Companion Flanges bolted on.

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DARLING
GATE VALVES

Say you saw it in The OIL WEEKLY

al, Q. Thibodaux, lcn; Stark et al 1, abn 1400 ft gyp.

ST. MARTIN'S PARISH — Rycade Oil Corp.'s Atchafalaya 1, fsh 3916 ft.

ST. MARY PARISH—La. Land & Explo. Co.'s West Cote Blanche 1, abn 2640 ft.

MOUNTAIN STATES

MONTANA

BIG HORN—Selig Oil Co.'s 1, se 21-6s-35, dr below 700 ft.

CARBON—Ohio Oil Co.'s Northern Pacific 1, 11-7S-21e, dr at 2440 ft. Book et al's Moore 1, 13-17-23, wait supplies td 850 ft. Atlantic Oil Co.'s 3, ne 20-7s-24e, casing cem at 948 ft.

CASCADE—Lone Star's McLean 1, 12-21n-3e, dr.

FERGUS—Melton Corp.'s Fenholt 1, 24-21-17, dr below 7230 ft. Mineral Research Co.'s 1, 13-17-23e, sd 843 ft for winter.

FLATHEAD—Flathead Pet. Co.'s Reservation 1, se 35-23-22w, rig.

GLACIER—Rimrock Oil Co., 29-35-5w, rig up.

HILL—A. H. McFarland, sw 15-30-13e, sd at 100 ft. Gad-Hamilton et al's Goldstone 1, sw 25-36-9e, rig. Equitable Oil Co.'s Perkins 1, 34-33-12e, 4,000,000 cu ft gas at 3330 ft.

LIBERTY—Chester Oils, Inc.'s Laird 1, 31-37n-6e, sd 2000 ft, delayed by bad weather. Sunburst O. & R. Co.'s Disotell 1, 10-37n-5e, d below 2400 ft.

MADISON—Madison County Oil Co.'s 1, nw 17-7s-1w, sd 1700 ft.

MUSSELSHELL—Manhattan Oil Co., ne 24-7-24e, sd 60 ft. McElwain Oil Dev. Assn., 2-11-22e, rig.

RICHLAND—Community Drill Co.'s Pioneer 1, rig to drill deeper from 2600 ft.

ROOSEVELT—Pioneer O. & G. Co.'s 1, se 35-27-51e, sd 1590 ft.

PONDERA—Embar Drlg. Co., 5-27-3w, dr 1890 ft. S. C. Ferdig et al, 8-27-4w, rig. Continental Dev. Co., sw 19-27-3w, dr below 600 ft.

PHILLIPS—Big Dome Oil Co.'s Bloomberg 1, ne 1-32-32e, set 12-in at 520 ft and dr ahead.

SWEETGRASS—Sheshone Consolidated, nw 23-2n-15w, casing trouble at 2100 ft.

TETON—Drilling et al, ne 9-25-1e, fsh at 1408 ft. Fidelity Oil Co.'s 1, 15-25-1e, abn 1340 ft. Bannatyne Oil Co.'s Eckelman 1, 29-26-1e, abn 3482 ft. Continental Dev. Co.'s Ritmoure 1, 8-27-5w, dr 900 ft. Elliott et al's Bannatyne 1, 19-26-1e, dr 1530 ft. Craig-Speer, McCutcheon, 9-23-2w.

TOOLE—Kevin-Flathead Oil Co.'s 1, ne 27-36n-23, sd 2200 ft. Zenith McDonald's Lowey 1, 35-36n-1w, dr 2135 ft. Sunburst O. & G. Co.'s Grandview 1, 10-34n-3e, rig. Commonwealth Pet. Co.'s Benjamin 1, 22-31-2e, abn 2100 ft. Madeline Oil Co.'s Swenson 1, 33-35-4w, dr 550 ft.

WYOMING

BIG HORN—Agate Oil Co., ne 13-51-92, testing, will probably abn. Utah Southern Oil Co.'s 3, 29-56n-97w, straight at 2345 ft. Wisconsin-Himes, 9-54-94w, contract compl to 571 ft.

CARBON—Graybeal Synd., 16-28-91, abn below 340 ft. Pacific American Oil Co., 31-25-91w, lcn.

CONVERSE—A. E. Tylee, ne 8-32-72, sd for repairs. Criterion Oil Co.'s Irvine 1, 5-31-70, coring below 3445 ft. John Ackard's McKinley 1, 21-31-69, suspended for winter below 3000 ft.

FREMONT—Producers & Refiners' Muskrat 1, 34-34-92, dr 1560 ft. Texas Prod. Co.'s Alkali Butte 1, 1-33-92, cem 15½-in, total depth 636 ft. Zola Oil Co.'s Crooks Gap 1, 25-27-93w, sd for winter, at 3750 ft. Iowa-Wyoming Iv. Co., 30-1s-2e, attempting water shutoff at 1500 ft.

JOHNSON—Fairway Oil Co.'s Crazy Woman 1, 7-47-82, no report. Tarrant Syndicate's 2, 17-46n-82w, undrr at 3625 ft. Murphy & Grove 10-41n-80w, sd 800 ft, hole full of water.

LINCOLN—Fontenelle Oil Co.'s 1, ne ne 1-24-n-113w, td 170 ft, showing 1060.

NATRONA—North Casper Creek O. & G. Co., se 1-36-82, sd. Combs Inv. Co., 12-39-78, dr below 500 ft.

NIOBRARA—Penn-West. Pet. Co., 13-35-n-62w, resuming at 800 ft. Hollingsworth Bros., 17-39-79, fsh tools at 1710 ft.

PARK—Union of Calif.'s Taylor 1, 22-47-101, dr 2745 ft. Fred G. Ostland's Hoodoo ranch 1, 23-51-101, dr 1740 ft. Honolulu Oil Corp.'s Four Bear 1, 29-48-103, dr 2820 ft. Ralph Arnold & Chas. Mau, nw¼, 25-58n-98w, dr 1580 ft. Ydoc Oil Co., ne 6-51n-101w, dr 875 ft. Honolulu Oil Co.'s Pitchfork 1, 14-48n-102w, lcn. Hoodoo Oil Co., 36-51-101, sp at 105 ft.

PLATTE—Walter Adams, Tr., sec 13-25-66, dr 1700 ft.

SWEETWATER—Boar's Tusk Oil Co., 16-23-104, dr below 1250 ft. Prairie O. & G. Co.'s Tucker 1, 18-13-199, sd for winter at 510 ft. P. & R. Marland of Colo., 26-20-104, sd for winter at 495 ft. Tower Pet. Co.'s 1, 6-14-103w, sp.

WASHAKIE—P. & R. Corp.'s Tensleep 1, 13-46-89, sd 3225 ft.

WESTON—Unknown persons, ne 15-44-64, run 15½-in for surface water. Gose Synd.'s 1, ne 28-47n-65w, attempting to pull 4¾-in at 4850 ft.

UINTA—Uinta Oil & Dev. Co., in Evanston, cem at 1200 ft.

TEXAS GULF COAST

Completions

Company, Well and Location		Initial Production Bbls.	Depth
AUSTIN COUNTY—			
Humble, Wilson 1, Raccoon Bend ..	*		1243
FORT BEND COUNTY—			
Gulf, Wolf 6, Long Point	*		1100
WHARTON COUNTY—			
C. L. Nail et al, Croom 1, 1 mile of Wharton	*		860
JEFFERSON COUNTY—			
Turnbow et al, Banks 2	*		4250

AUSTIN COUNTY—Humble's Gotosky 2, Raccoon Bend, dr 1676 ft shale; Wilson 1, Raccoon Bend, abn 1243 ft; Stravoski 1, Raccoon Bend, dk. Alexander & Lyles' Goebel 1, sd 1300 ft. L. H. Weadock's R. M. Ward 1, rig.

BRAZORIA COUNTY—Roxana's Allen Bernard 1, Allen Dome, making small heads, td 5335 ft; Allen 4, Allen Dome, sdtrk at 4796 ft; Randon 1, Allen Dome, td 4180 ft hard sand, coring; Bell 2, Clemons Dome, set 9⅝-in cas at 4872 ft.

CHAMBERS COUNTY—Pure Oil Co.'s Lost River 1, Lost Lake Dome, set cas at 1142 ft.

COLORADO COUNTY—Rich Oil Corp.'s Von Rosenberg 1, about 2½ mi s of Columbus, sp.

FORT BEND COUNTY—Gulf's Wolf 6, Long Point, abn 1100 ft. Sun Oil Co.'s Kasparek 1, Boling, dr 1860 ft gumbo; R. R. Farmer 4, ru. Humble's Sugarland Industries 1, Sugarland, rig up.

HARRIS COUNTY—Dr. P. S. Griffith's Fee 2, 12 mi n of Houston, sd. Juanita Oil Co.'s Kitsman 1, 3 mi n of Cypress, sd 1180 ft. Humble-Marland's Warren 2, Hockley, dr 2985 ft packed sand.

JEFFERSON COUNTY—Deep Test Oil Co.'s McFaddin 1, 4 mi ne Spindle Top, sd 2175 ft. Beaumont Oil & Prospecting Co.'s Tyrell 1, 3 mi nw Beaumont, dr 4200 ft shale. Southern Spindle Top O. & Dev. Co.'s Young 1, 1 mi w of Nederland, dr 3200 ft. Jim McMurry's Crosby 1, 5 mi ne Port Arthur, sdtrk and sd 3350 ft.

LIBERTY COUNTY—Harrison Oil Co.'s Quintette 2, N. Dayton, temp abn 4602 ft. Judge Titwell et al's Gardner 1, 5 mi e of Davis Hill, td 3510 ft, washing. The Texas Co.'s Havard 1, Davis Hill, dr 3985 ft. Barlow et al's Minchcliff 1, 2½ mi ne Cleveland, sd 2215 ft.

MATAGORDA COUNTY—Matagorda County Dev. Co.'s Hawkins 1, Bay City, sd 1985 ft.

MONTGOMERY COUNTY—Brains et al's Fitch A-1, 3 mi e of Spring, dr 3600 ft sand rock, Johnson Hardy's Hardy 1, 4 mi s of Conroe, dr 1000 ft sand and gumbo. J. W. Hardy's Stewart 1, lcn.

WALLER COUNTY—J. R. Garrett et al's Garrett 1, 12 mi s of Hempstead, dr below 970 ft shale.

WHARTON COUNTY—C. L. Nail et al's Croom 1, 1 mi e of Wharton, abn 860 ft. Ingram Prospecting Co.'s Hounshell 1, lcn.

WEST TEXAS

Completions

Company, Well and Location		Initial Production Bbls.	Depth
CROCKETT COUNTY—			
McMannon Oil Co., Blakeney 1....	*		4050
VAL VERDE COUNTY—			
Douglas Oil Co., Sellars 1	*		4280

ANDREWS COUNTY — A. G. Carter & Henry Zweifel's Cowden 1, elev 3156 ft, top salt 1575 ft, top lime 4150 ft, dr 4800 ft. J. S. Cosden et al's Ratliff-Bedford 1, sd 4116 ft. Calvin-Belt et al's Bedford-Ratliff 1, elev 3194 ft, top salt 1610 ft, dr 3000 ft. Deep Rock Oil Co.'s Harris 1, elev 3173 ft, co 1050 ft. C. B. McKennon et al's Means 1, elev 3144 ft, top salt 1381 ft, sd for cas 1385 ft.

BORDEN COUNTY—Marland Oil Co.'s McDavid 1, dr 825 ft.

BREWSTER COUNTY—Cowden-Bowser et al's Jackson-Harmon 1, rig. J. M. Hickey et al's Jackson-Harmon 1, sd 510 ft. Van McPhail et al's McIntyre 1, sd 1057 ft. Mid-Kansas O. & G. Co.'s Turney 1, dr 2205 ft. Reese & White's Kimball 1, dr 1220 ft. Wilcox Anderson et al's Gage 1, dr 1655 ft.

COKE COUNTY—Brown et al's Foster 1, sd 2250 ft. Danciger O. & R. Co.'s Byrne 1, dr 3115 ft. Lipan Oil Co.'s Conner 1, sd 3315 ft; Rawlings 1, dr by junk 2736 ft.

CONCHO COUNTY — Exploration Co.'s Hartgrove 1-A, dr 730 ft. Lawson & Parks' Schultz 1, elev 1731 ft, sd after shot 1090 ft.

CRANE COUNTY—Crane County Dev. Co.'s Mosley-Brookfield 1, dr 555 ft. Duffey & Gault Brown's Cowden 1, elev 2537 ft, top salt 895 ft, top lime 2729 ft, dr 3220 ft. Gulf's Waddell 3, dr hfw 835 ft. Texas Dev. Co.'s Cowden 1, top lime 2635 ft, fsh 4005 ft.

CROCKETT COUNTY—J. S. Cosden et al's Paul Perner 1, sd 615 ft. Corbett & Gill's University 1, sd 2050 ft. W. W. Donnelly et al's Shannon 1, sd making gas 1664-80 ft; Shannon 2, lcn; Massie 1-A, dr 305 ft; Todd 1, lcn. Gulf's Thompson 3, top lime 835 ft, cem cas 856 ft. Jas. Kelly et al's Todd 1, elev 2661 ft, co after shot 120 quarts 1909-45 ft, td 2605 ft. C. A. Jones et al's Powell 1, sd for shot with oih 2590-2634 ft. Osage Oil Corp. et al's Halff 1-A, sd 315 ft. Bob Penn et al's Powell 1, elev 2759 ft, top salt 1065 ft, fighting heaving sand 2355 ft. C. E. Simmons & Co. et al's Talff 1, elev 2152 ft, top salt 440 ft, dr 785 ft. World Oil Co.'s Schneeman 1-B, elev 2663 ft, fsh 2330 ft.

CULBERSON COUNTY—Deep Rock Oil Co.'s T. & P. Fee 2, sd 1210 ft; Seah 1, spd and sd. Jas. Gardner et al's Radford 1, sd 610 ft.

JEFF DAVIS COUNTY—Humble O. & R. Co.'s C. Flores 1-A, dr 2265 ft. E. L. Smith Oil Co. & J. K. Hughes' Means 2, ur cas 2305 ft.

ECTOR COUNTY—J. S. Cosden & Texas Co.'s Connell 5, elev 2843 ft, top salt 925 ft, top lime 3375 ft, dr 3410 ft.

FISHER COUNTY—Cranfill-Reynolds' J. A. Young 1, dr 2020 ft. Ideal Oil Co.'s Jameson 1, dr 3435 ft. Marland Oil Co. & Vacuum Oil Co.'s Lagow 1, co 3500 ft. The Texas Co.'s Dan Stephens 1-A, dr 2635 ft.

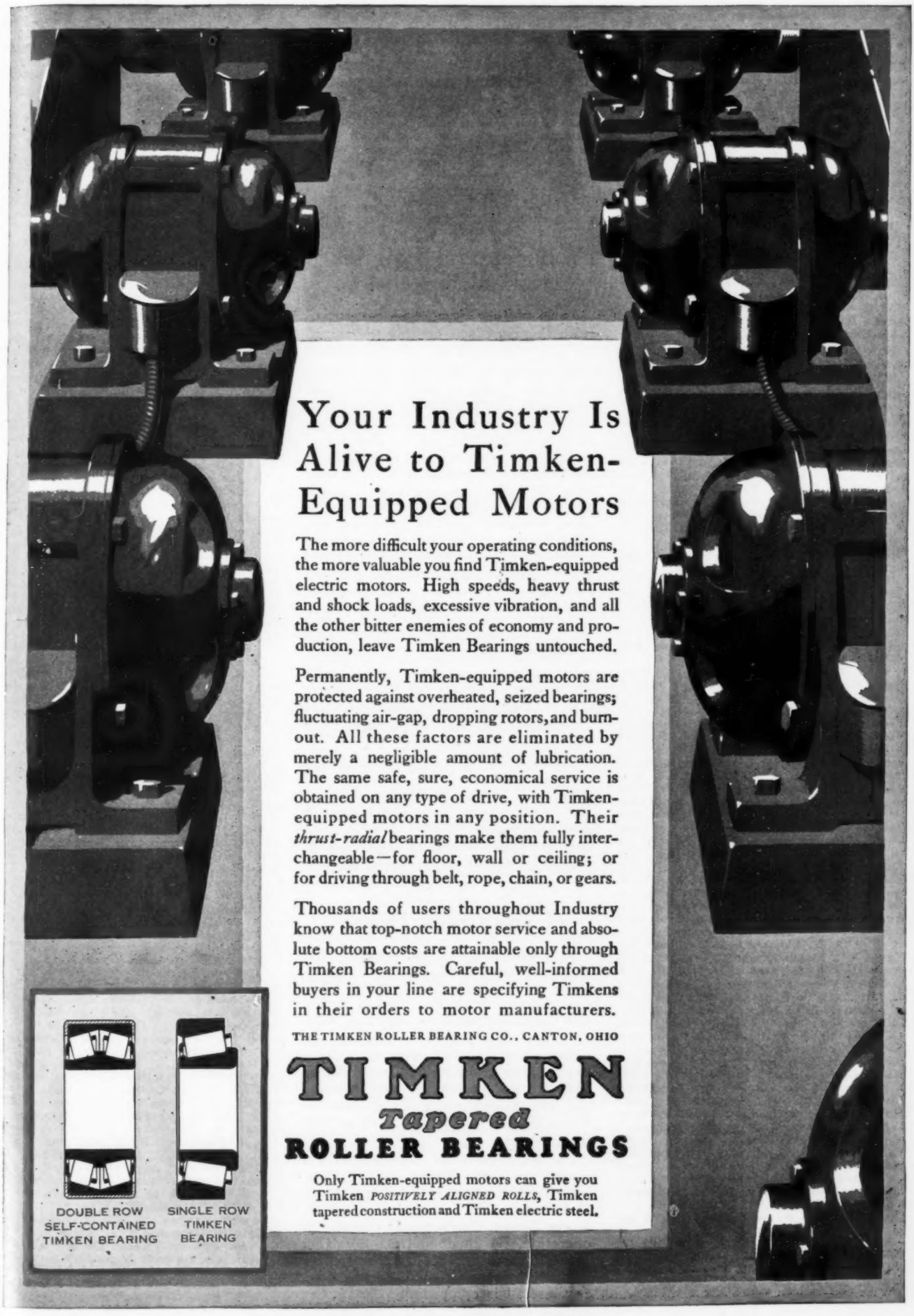
GARZA COUNTY—Gulf Prod. Co.'s Swenson 1-A, elev 2492 ft, top salt 495 ft, dr 1890 ft.

GAINES COUNTY—Westheimer & Daube's Forbes 1, fsh 4660 ft.

TOM GREEN COUNTY—Cox et al's Llano 1, dr 468 ft. Fitzgerald & Taliaferro's Bennett 1, dr 1715 ft. Haubelt et al's Johnson 1, sd 650 ft. Marland Oil Co.'s Johnson 1, fsh 2835 ft; Johnson 1-A, dr 1975 ft. Tulsa Oil Co.'s Adams 1, sd 1020 ft.

HOCKLEY COUNTY—World Oil Co.'s Ellwood 1, elev 3363 ft, sd repairs 1450 ft.

HOWARD COUNTY—Bristow & Merrick's Hooks 4, dr 1810 ft. The California Co.'s Fisher 1, elev 2623 ft, top lime 3065 ft, dr 3585 ft. Cayle-Concord Oil Co.'s Roberts 1, sd 1740 ft; Roberts 2, cem cas 1650 ft; Roberts 3, spd and sd. Dixie Oil Co.'s Clay 1, dr 2945 ft. F-H-E Oil Co.'s Roberts 1-C, dr 1010 ft; Roberts 1-D, spd and sd. Godley O. & G. Co.'s Hooks 2, dr 1510 ft; Hooks 3, rig. Henshaw & Co.'s Settles 1, sd 1900 ft. Magnolia's Kelly-Chalk 9, dr 875 ft; Mary-Chalk 8, dr 1445 ft; Mary-Chalk 9, dr 225 ft; Roberts 2, spudding; Roberts 4, lcn; Roberts 3, 5 and 6, rigs. Marland Oil Co.'s Clay 1-E, elev 2662 ft, dr 3450 ft;



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The more difficult your operating conditions, the more valuable you find Timken-equipped electric motors. High speeds, heavy thrust and shock loads, excessive vibration, and all the other bitter enemies of economy and production, leave Timken Bearings untouched.

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TIMKEN
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Only Timken-equipped motors can give you Timken *POSITIVELY ALIGNED ROLLS*, Timken tapered construction and Timken electric steel.

DOUBLE ROW SELF-CONTAINED TIMKEN BEARING

SINGLE ROW TIMKEN BEARING

Clay 6-A, fsh 1825 ft; Clay 7-A, dr 1805 ft; Richardson 1, elev 2359 ft, top salt 870 ft, ur 1530 ft. Marland & Texon's Connally 1, dr 3985 ft; Settles 2-A, rig. Marland & F. P. Zoch's Jones 1, top salt 970 ft, dr 1990 ft. Mays-Nixon et al's Flowers 1, dr 760 ft. Miley Oil Corp. & Marland's Read 1, spd and sd. Owen-Sloan et al's Roberts 1, cem cas and stdz 1930 ft. Peer Oil Corp.'s Read 1, dr 3215 ft. Shermerhorn Oil Co.'s Roberts 1, dr 1755 ft. Sprague Oil Co.'s Roberts 1, lcn. Sun Oil Co.'s Settles 1, rig. Sweeney & Henry's Chalk 2, dr 310 ft; Chalk 3 and 4, lcns; Chalk 5, ur 1050 ft. Ward Oil Co.'s Roberts 1, dr 760 ft. Weekly Oil Corp. et al's Roberts 1, rig.

HUDSPETH COUNTY—Lockhart & Co.'s Moore 1, sd 905 ft; Gardner-Mosley 1, dr 980 ft.

IRION COUNTY—F. E. Webb et al's J. M. Nutt 1, spd and sd.

JONES COUNTY—E. P. Campbell et al's Herndon 1, sd 3009 ft. R. F. Garland & Co.'s Glynn 1, sd 2430 ft. Gibson Johnson's Camp 1, sd 2208 ft. Hutson-Weaver's Smith 1-A, sd 1980 ft. W. G. Stough et al's Bennett 1, sd 800 ft; Willis 1, sd 1740 ft. Swensondale Oil Co.'s Canton 1, sd 3200 ft.

KING COUNTY—Humble's Pitchfork 1, dr 2925 ft. Pattison et al's Patton 1, dr 3155 ft.

MIDLAND COUNTY—Shoup et al's Parks 1, lcn.

NOLAN COUNTY — John H. Winemiller Corp.'s Arledge 1, dr 1235 ft.

PECOS COUNTY—Geo. Anderson et al's Sherbino 1, dr 285 ft. The California Co.'s Smith 1-A, rig; Smith 4, set cas 1494 ft; Smith 5, cem cas 800 ft; Smith 6, dr 295 ft; Smith 7, dr 450 ft; Smith 8, fsh 85 ft; Smith 9 and 10, rigs; Yates 2, rig; Yates 1, flowing oil, dr 1094-1183 ft; Yates 8, dr 1285 ft; Yates 9 and 10, rigs. Cummings et al's Blackstone & Slaughter 1, dr 2155 ft. Crude Oil Co.'s River Bed 5, rig; River Bed 11, cem cas 850 ft. Day Bros. & McKnight's Yates 1, elev 2213 ft, top salt 440 ft, fsh 820 ft. Douglas Oil Co.'s Sellman 2, rig. Everett et al's J. Fields 1, lcn. Gibson Oil Corp.'s Russell 1, rig. Gulf Prod. Co.'s Smith 2, flow 95 bbls per hour, dr 1295-1423 ft; Smith 3, dr 890 ft; Smith 4, dr 750 ft; Smith 5, Spudding; Smith 6 and 7, machines; Yates 4, rig; Yates 5, spudding; Yates 6 and 7, rigs. Henshaw & Co.'s Corder 1, spudding; Sweatt-Hinyard 1-A, elev 2770 ft, dr 1910 ft. Humble O. & R. Co.'s Smith 4, dr oil pay 1470-1520 ft; Smith 5, dr 1144 ft; Smith 1-B, flowing by heads, fsh tools in pay 1340-1465 ft; Smith 3-B, dr 370 ft; Tippett 1, rig. Kershaw & Livingston's Cannon 1, cellar dug. Kirby Pet. Co. et al's Harral 1, top salt 1005 ft, dr 1310 ft. Robt. Lee et al's Parker 1, rig. Marland Oil Co.'s Yates 9-A, cem cas 898 ft; Yates 10-A, flow 120 bbls per hour 973-90 ft. McMan O. & G. Co.'s Tippett 1, rig. McMan & Marland Oil Co.'s Yates 12, cem cas 1240 ft; Yates 13, dr 860 ft; Yates 14, dr 780 ft; Yates 15 and 16, rigs. Mazda & Savoy's Smith 2, rig. Mid-Kansas O. & G. Co.'s Pryor 1, rig. Mid-Kansas & Transcontinental's Smith 2, machine; Smith-Taylor 5, flowed 115 bbls hourly dr pay 1165-1225 ft; Smith-Taylor 6, sd storage 1217 ft; Smith-Taylor 7, 8 and 9, machines; Yates 8-A, dr 940 ft; Yates 10-A, machine; Yates 11-A, sd 153 ft; Yates 12-A to 16-A, machines; Yates 7-B, flowed 230 bbls oil nine minute gauge 1165-1268 ft; Yates 10-B, 11-B and 12-B, machines; Yates 13-B, dr 740 ft; Yates 14-B, sr 852 ft; Yates 16-B, dr 1010 ft; Yates 17-B, rig; Yates 18-B, dr 145 ft; Yates 19, 21, 22 and 23-B, machines; Yates 20-B, dr 110 ft; Yates 4-C, show oil dr 665 ft; Yates 6-C, machine; Yates 8-C, cem cas 602 ft; Yates 9-C, cem cas 608 ft; Yates 10-C, lcn; Yates 2-D, dr 400 ft. Moody Corp.'s Corder 1, dr 470 ft. Olean Pet. Co.'s Harral 1, set cas 2995 ft. Oregon Oil Corp.'s Yates 1, lcn. Roxana Pet. Corp.'s Smith 3, dr 415 ft; Smith 4, dr 690 ft; Smith 5, machine; Tippett 4, set cas 854 ft; Tippett 5, dr 110 ft; Tippett 6 and 7, rigs. Simms Oil Co.'s Smith 4, skid rig, td 640 ft, spudding; Smith 5 and 6, rigs. B. J. Spikes et al's Brown 1, spd and sd. Transcontinental's Blackstone-Slaughter 1, elev 3539 ft, making one-quarter million ft gas 3565-70 ft. World Oil Co.'s M. Cerf 1, elev 3435 ft, spd and sd; Kloh 1, elev 2810 ft, rig.

REAGAN COUNTY—Camp & Henshaw's University 1, elev 2772 ft, top salt 1130 ft, fsh 2075 ft. Skelly Oil Co.'s University 1, elev 2895 ft, top salt 1340 ft, fsh 2795 ft. J. T. White et al's Shafner-Sterling 1, dr 820 ft.

REEVES COUNTY—The Exploration Co.'s A. A. Kinney 1, ur 1275 ft. D. R. Thompson et al's Eddins 1, dr in salt 4140 ft. Grisham-Hunter's Rathage-Conner 1, machine. World Oil Co.'s A. L. Duff 1-A, elev 2774 ft, sd 4514 ft.

RUNNELS COUNTY—Empire Gas & Fuel Co.'s Clay 1, dr 1715 ft. Gibson-Johnson's Harris 1, lcn; Serratt 1, rig. Kenwood Oil Co.'s Talley 1, sd 1720 ft. Noble O. & G. Co. et al's Simms 1, ur 2945 ft. Henry B. May et al's Schneider 1, elev 1666 ft, sd 1075 ft. Miles Oil Co.'s Lawhon 1, sd 2250 ft; Chas. Ray 1, dk. Royal Pet. Co.'s Willigham 1, rig. Swensondale Oil Co.'s Werner 1, elev 1803 ft, sd 1850 ft. Watchorn O. & G. Co.'s King 1, dr 1165 ft.

SCHLEICHER COUNTY—Thos. Gray et al's Robinson 1, sd 3070 ft.

TAYLOR COUNTY—A. J. Brown Prod. Co.'s Henslee 1-A, elev 2010 ft, co 2265 ft. Owen-Sloan et al's Latimer 1, co 2605 ft. Roeser-Pendleton Inc.'s Butman 1, ur 2900 ft. Gilbert Johnson et al's Brown 1, fsh 835 ft.

TERRELL COUNTY—W. W. Donnelly et al's Proessner 1, lcn. Deep Rock Oil Co.'s Noelke 1, rig Milham Corp.'s Bassett 1, dr 805 ft. Humble O. & R. Co.'s University 1, rig.

UPTON COUNTY—Curtis et al's Giddings 2, sd 630 ft. Southern Crude's Hobbs 1, dr hfw 2435 ft. The Texas Co.'s Cordova 1, (Sec. 23) elev 2576 ft, top lime 1948 ft, ur 2318 ft.

VAL VERDE COUNTY—Magnolia's Whitehead 1, dr 5435 ft. O. O. Owens et al's Mills 1, dr 3540 ft.

WARD COUNTY—Selby et al's Dooley 1, rig.

WINKLER COUNTY—Amerada Petroleum Corp.'s Walton 1, elev 2833 ft, fsh tools in gas 2409 ft. Atlantic Oil Prod. Co.'s Grisham-Hunter 2, set up rotary, td 2666 ft; Grisham 3, rig; Grisham 4, lcn; Grisham 1-C, dr 2380 ft; Grisham 1-E, cem cas 2274 ft; Hendricks 1, flowing by heads fsh 2830-2936 ft; Hendricks 1-D, dr 2710 ft; Hendricks 2-D, dr 2185 ft. Atlantic and J. D. Collett's Hendricks 1-F, rig. Arizona Mining & Eng. Co.'s Hendricks 1, spd and sd. V. T. Bolin & Co.'s Brown 1, spd and sd. The California Co. & Cranfill's Bashara 1, sd 3500 ft. Cranfill-Reynolds' Hendricks 1-B, cem cas 2359 ft; Hendricks 1-C, rig. Eastland Oil Co.'s Hendricks 1, fsh 2536 ft. Gulf's Hendricks 2, rig; Hendricks 5, dr 2810 ft; Hendricks 8 and 9, dks. Humble O. & R. Co.'s Grisham 1, dr by Junk 2763 ft; Grisham 3, dr 2420 ft; Grisham 5, rig; Hendricks 2-B, dk; Hendricks 3-B, cem cas 2846 ft. Independent O. & G. Co.'s Grisham 2, co and flowing oil 2815 ft; Grisham 3 and 4, lcns; Grisham 5 and 6, rigs; Grisham 1-B, dr 1465 ft; Grisham 2-B and 3-B, dks; Hendricks 1-B, (sec 44) sd for storage in pay 2846-3043 ft. Landreth Prod. Corp. & Roxana Pet. Corp.'s Hendricks 1-A, co to dd after shot td 3013 ft; Hendricks 2-A and 3-A, dks; Hendricks 4-A, flowing 2945 bbls. oil daily fsh 2930 ft; Liner Drilling Co.'s Campbell 1, spd and sd. Magnolia's Hendricks 2, top lime 2512 ft, dr 2815 ft; Hendricks 3, cem cas 2425 ft; Hendricks 4, top salt 1410 ft, dr 1500 ft; Hendricks 5, rig. Murchison Oil Co. and Cranfill Bros. Oil Co.'s Grisham 2, 4 and 1-B, lcns; Grisham 2-B, flowing 435 bbls oil daily sd shot 2890-3050 ft; Grisham 3-B, cem cas 2427 ft; Grisham-Hunter 4-B, dr 2820 ft. Joe Maxwell & L. C. Turman's Hendricks 1, sd flowing 75 bbls oil daily 2879 ft; Hendricks 2, top lime 2452 ft, dr 2790 ft; Hendricks 3, top lime 2480 ft, dr 2600 ft. Republic Prod. Co.'s Grisham 1-A, flowing oil dr pay 2800-12 ft; Grisham 1-B, (sec 41) sd 2008 ft; Grisham 2-B, dr 2315 ft. Roxana Pet. Corp.'s Grisham 1-A, (sec 45) sd, spraying oil 2801 ft; Hendricks 1-B, (sec 29) fsh bailer 3010 ft; Hendricks 2-C, dr 410 ft; Hendricks 3-C, 4-C and 5-C, rigs; Hendricks 1-D, dr 2510 ft; Hendricks 2-D, lcn. Sheldon & Burden's Hendricks 1, elev 2806 ft, cem cas in lime 2715 ft. Southern Crude & R. A. Westbrook's Grisham 1-A-T-89, sd making oil and gas after shot 2687 ft; Grisham 2-A-T-89, cem cas 2301 ft; Grisham 3-A-T-89, cem cas 2355 ft; Grisham 4-A-T-89, rig; Grisham 2-B-T-88, (sec 4) cem cas 2659 ft; Hendricks 1-C-T-88 (sec 28) co 2879 ft; Hendricks 2-C-T-88, dr 2720 ft; Hendricks 3-C-T-88, dr 2705 ft; Hendricks 4-C-T-88, cem cas 2586 ft; Hendricks 5-C-T-88, dr 2465 ft; Hendricks 6-C-T-88, dr 2530 ft; Hendricks 7-C-T-88, cem cas 2435 ft; Hendricks 1-G-T-88, lcn; Hendricks 1-I-T-88, dr 640 ft; E. G. Hutchings 1-T-90, rig. Southern Crude & Dixie Oil Co.'s Grisham 1-A-3-T-68, fsh tools with hfo 2740 ft; Grisham 2-A-3-T-68, sd storage 2288 ft; Grisham 3-A-3-T-68, top lime 2270 ft, dr 2290 ft; Hendricks 1-A-3-T-67 (sec 4) sd 3072 ft; Hendricks 2-A-3-T-67, sd storage 2646 ft; Hendricks 1-B-T-67, stdz 2648 ft; Hendricks 5-C-T-67, rig; Hendricks 2-F-T-67, 3-F-T-67 and 4-F-T-67, rigs. The Texas Co.'s (was Pure Oil Co.) Grisham 2, making oil and gas, re-bldg burned rig, td 2825 ft; Grisham 3, cem cas 2360 ft; Grisham 1-B, (sec 34) installing rotary account big gas 2720 ft; Grisham 2-B, dr 2610 ft; Grisham 3-B, dr in gas 2600-10 ft; Grisham 4-B, lcn. Texon Oil & Land Co.'s Grisham 2-A, fsh tools in gas 2725 ft; Grisham 3-A, cem cas 2140 ft; Grisham 1-B, (sec 45) dr 1575 ft; Grisham 2-B, dr 2110 ft. White Eagle O. & R. Co. et al's Leck-Collins 1, sd 3260 ft.

Producer and Failure in Burbank Extension

Tulsa.—While the Phillips Petroleum Company was missing the pay in its north offset to the A. G. Oliphant extension to the Burbank field, Prairie Oil & Gas Company, now owner of the extension, was completing a south offset, its No. 5, in the northeast quarter of section 20-27-6e, for a 1200 barrel well. The No. 3, which extended Burbank's eastern producing edge a half mile to the east more than a month ago, is still holding above 2000 barrels after having a peak of approximately 5000 barrels. The Prairie purchased a two-thirds interest in this well and its present holdings offsetting the well for two-thirds of a million dollars shortly after completion of the well by A. G. Oliphant and associates. The Prairie's No. 5 topped the sand at 2901 and drilled 15 feet into pay. Phillips Petroleum's test was No. 4, located in the southeast of the southeast of section 17-27-6e, missed the Burbank sand altogether, and was being drilled to the Wilcox late last week.

Prairie's No. 4, two locations from the east line and a location from the south line of the northeast corner of section 20, topped the Burbank sand at 2901 feet and late in the week had 300 feet of oil in the hole at 23 feet in the sand. It was to be shot for completion.

Cane Creek Dome

Salt Lake City—Utah Southern Oil Company has started moving in equipment for its John Shafer 1, on Cane Creek dome, 36-26-20. Derrick which was originally used on the first John L. Shafer test will be moved up the river several hundred yards to the new site. Camp at Frank Shafer 1 will be used for the present by the crew for the John Shafer test, and fuel from the Frank Shafer well will be used to drill the new test.

Phillips Petroleum Corporation recently has made an operating agreement to drill a test in the Green River Desert area near Sweetwater structure, where Texas Production Company is operating. A road contract involving $15,000 was let recently and drilling equipment is to be moved in as soon as the road is completed.

Part and Parcel of the 4th Dimension

ADVERTISING has been employed by the manufacturers to call attention to the 4th dimension in Axelson Sucker Rods, and of this fourth dimension we are part and parcel.

Into it enter "Time, Experience, Research, Testing, Constant Betterment, Highly Technical Methods"—and on our own part, distribution that understands and contemplates the requirements of the Oil Man together with active engineering co-operation through our crews all over the Mid-Continent.

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EAST TEXAS

ANDERSON COUNTY—Brooks et al's Henby 1, Joseph Mertz sur, dk. Humble's Jones 1, Dan Roberts sur, coring 3650 ft; Spencer Clemens 3, Sessions sur, dr 3830 ft. Pure Oil Co.'s Cook 1, A. Lewellen sur, sd 1600 ft.

CAMP COUNTY—J. C. Rogers' Boyd 1, R. M. Montgomery sur, dr 117 ft.

CHEROKEE COUNTY—Humble's Elliott & Clark 1, M. Windsor sur, tested sw at 3937 ft; Ragsdale 3, N. Johnson sur, sd 3916 ft. Panhandle Oil Co.'s Whalen 1, J. Jordan sur, sd 550 ft. Joe Walter et al's Barns & DeLoach 1, Perry Reese sur, dr 75 ft.

HENDERSON COUNTY—W. K. Cayton et al's Hoffer & Nash 1, H. Jefferson sur, sd 2910 ft.

HARRISON COUNTY—Doney et al's Furrh 1, Joel Lipscomb sur, set 6-inch at 986 ft; Furrh 2, Joel Lipscomb sur, dk. Ferguson et al's Abney 1, G. W. Martin sur, set 10-inch at 105 ft. Magnolia's Anderson 1, J. Womack sur, wosr 2402 ft. Mitchell et al's Jones 1, J. Lipscomb sur, tested dry at 956 ft. State Line O. & G. Co.'s Abney 5, E. Little sur, coring 2843 ft; Mullins 2, T. D. Wilson sur, set 6-inch at 955 ft. Tylong O. & G. Co.'s Vaughan 2, W. R. Anderson sur, rig. A. L. Waller et al's Bryson 2, W. R. Anderson sur, set 6-inch at 1893 ft.

KAUFMAN COUNTY—Cranfield et al's Nicholson 1, A. Bennett sur, sd 3250 ft.

MARION COUNTY—William Gross' Baker 1, J. French sur, wosr 2391 ft. Lumbermans Oil Co.'s Bonham 1, R. Potter sur, wosr 1000 ft.

NACOGDOCHES COUNTY—P. R. Harris et al's Griffin 1, J. W. Anderson sur, sd 280 ft. Stein & Lewis' Birdwell 1, Jose A. Chirino sur, sd 1100 ft. Union Sulphur Co.'s Whitermark 1, Jose A. Chirino sur, dr 2420 ft.

PANOLA COUNTY—Bethany O. & G. Co.'s Burns 3, W. A. Birdsong sur, set 12-inch at 90 ft; Burns 4, W. A. Birdsong sur, dk; Richardson 3, J. Yarnell sur, dk. Magnolia's Jernigan 2, Jane Thorpe sur, set 8¼-inch at 1005 ft; Fletcher 1, B. C. Jordan sur, set 6⅝-inch at 2303 ft; S. Davenport 2, Jessee Dunlop sur, wosr 2398 ft; Trosper 1, J. Shandoin sur, dr 2362 ft; Sol Oden 1, E. F. Mitcheson sur, set 13⅜-inch at 127 ft.

RUSK COUNTY—C. M. Joiner et al's Bradford 1, K. Ximines sur, fsh 1109 ft. Magnolia's Durren 1, Agulla Norris sur, dk. McCurrie et al's Sparks 1, Jessee Coarse sur, sd 2148 ft. The Texas Co.'s Schultz 1, A. Loffton sur, dr 3257 ft. Osborne et al's Matthews 1, D. Cortinas sur, sd 2330 ft.

SMITH COUNTY—Dr. Gaither's Parker 1, Don Thomas Quevedo sur, fsh 3251 ft.

SHELBY COUNTY—Magnolia's Pickering Lbr. Co. 1, Wm. J. Crane sur, fsh 3273 ft. Wm. Sebastian's Pickering Lbr. Co. 1, T. F. Polly sur, arr to set cas 2923 ft.

SABINE COUNTY—Crater Oil Co.'s Nona Mills 2, Anthony Shoals sur, junked hole while sidetracking at 3180 ft, td 3294 ft.

UPSHUR COUNTY—S. W. Richardson's Newsome 1, J. R. Davis sur, sd 2025 ft; Minor 1, A. Lofery sur, fsh 3500 ft.

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
CALHOUN COUNTY—		
Genther et al, Stout 1, 3-14-16	*	3008
COLUMBIA COUNTY—		
The Texas Co., Alexander 1, 8-17-19	*	2001

BRADLEY COUNTY—Johnson & Adams' Southern Lbr. Co. 1, 12-12-12, sd 2204 ft.

COLUMBIA COUNTY — Mitchell et al's Franks 1, 25-19-22, sd 150 ft. Sunny Jim Oil Co.'s Runyan 1, 3-16-21, dr 1290 ft. Van Hagen Synd.'s Pickler 1, 19-19-22, set 12½-in at 200 ft.

DREW COUNTY—McClintock et al's Ogle 1, 35-13-3e, sd 2550 ft.

GRANT COUNTY—Jones et al's Meeks 1, 5-4-11, sd 1400 ft.

LA FAYETTE COUNTY — Ken-Saw Pet. Co.'s Kensaw 1, 31-18-24, dr 3250 ft.

LINCOLN COUNTY—Pine Prairie O. & G. Co.'s Carter 1, 33-10-6, sd 2176 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 2-13-31, sd 2941 ft.

MILLER COUNTY—Guess et al's Sanderson 1, 14-15-25, sd 896 ft. Lenze et al's Mann 1, 22-15-26, sd 2889 ft.

NEVADA COUNTY—Aines & Zinng's Womack B-1 (formerly No. 1) 10-14-21, wosr 1215 ft. Fruen et al's Rhodes 1, 22-12-21, sd 1513 ft. Humble O. & R. Co.'s Groves B-4, 1-14-21, wosr 1140 ft. McDonald et al's Pell 1, 9-15-22, dr 2175 ft. J. J. O'Brien's Haynie A-5, 6-14-20, wosr 1204 ft. Haynie B-1, 6-14-20, wosr 1218 ft; Haynie B-5, 1-14-21, plugged back to 1163 ft; Moss A-14, 1-14-21, wosr 1160 ft; Moss A-15, 1-14-21, wosr 1170 ft; Moss A-17, 1-14-21, rig. Wright Oil Co.'s Groves 3, 12-14-21, wosr 1151 ft.

OUACHITA COUNTY—Buffalo Oil Co.'s Culp 1, 22-15-19, sd 2075 ft. Brewer et al's Curry 1, 32-15-19, wosr 2201 ft. Copenhagen et al's Berg 3, 13-15-17, sd 2193 ft. A. T. Grayson's Reynolds 1, 21-14-17, sd 1756 ft. H. M. Harrell's Ponder A-1, 18-12-17, dr 1250 ft. Humble O. & R. Co.'s Murphy 4, 3-16-15, arr to test 2582 ft. Magnolia's Stout B-1, 28-14-16, dr 3130 ft. Marine Oil Co.'s Hayes 5-A, 4-16-15, lcn; Hayes 8, 4-16-15, tested sw 2677 ft. Phillips Pet. Co.'s Betty Joyce 19, 33-15-15, dr plug 2693 ft. Standard Oil Co.'s Umsted 5, 32-15-15, dr 2490 ft.

UNION COUNTY—Brown et al's Slaughter 1, 2-17-16, sd 2296 ft. Bondurant et al's Garner 1, 8-18-12, sd 2635 ft. Booth et al's Rowland 1, 8-17-11, coring 2966 ft. Garrett-Modisette Drilling Co.'s Gregory 1, 10-17-14, wosr 2765 ft. Gulf's Murphy 45, 4-16-15, dk. Grimes Bros.' Williams 2, 8-18-14, wosr 2239 ft; Van Hook 9, 7-18-14, set 10-in at 160 ft. Imperial O. & G. Co.'s Goodwin 1, 26-17-16, sd 3118 ft. E M. Jones' Crain 1, 2-17-14, flowing 3000 bbls fluid, 80 per cent water, 3062 ft; Crain 2, 2-17-14, set 10-in at 310 ft; Crain 3, 2-17-14, rig; Crain 4, 2-17-14, lcn. W. R. Keever's Ezell 4, 12-17-15, wosr 2159 ft; Ezell 5, 12-17-15, lcn. Keene & Wolfe's Murphy 6, 9-16-15, dk. Lion O. & R. Co.'s Horn 1, 17-17-13, dr 2325 ft. Laurel O. & G. Co.'s Houston 1, 12-16-16, arr to deepen (depth not known). Lyell et al's Stegall 1, 11-17-15, set 12½-in at 47 ft. Magnolia's Carrol 2, 1-17-14, sd 1500 ft; Crawford 3, 8-16-16, dk; Laney 3, 8-16-16, dk; Laney 4, 6-16-16, dk; Wilson 7, 17-16-15, tested 500 ft oil through ds at 2480 ft; Murphy 8, 8-16-15, cmtd back to 2440 ft. Mountz et al's Pratt 6,

60 SEATS

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Kevin, Montana.
March 30,1927

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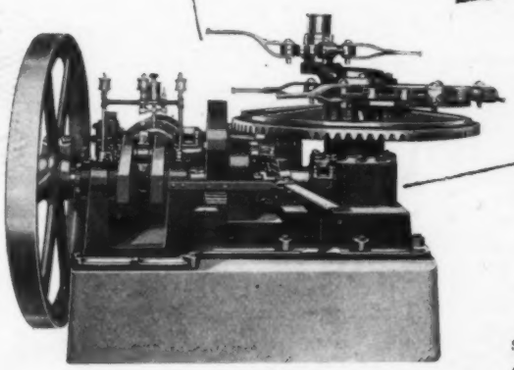
We might say that this power has been in continuous operation since November,1925 and this company has never lost a barrel of production on account of this engine. It has given us more real satisfaction than anything we have have ever sold.

Yours very truly
GREAT NORTHERN TOOL & SUPPLY CO.
Manager

"... this power has been in continuous operation since November, 1925, and this company has never lost a barrel of production on account of this engine. It has given us more real satisfaction than anything we have have ever sold."



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8-18-15, recmtd 6-in at 2146 ft. C. E. Murdock's Murphy 2, 17-16-15, arr to deepen with cable tools, 2754 ft. Murdock et al's Vestal 1, 17-16-15, sd 2561 ft. National Cons. Pet. Corp.'s Fagg 1, 8-16-16, wosr 2643 ft. Natural Gas & Fuel Corp.'s Hill B-3, 5-16-15, lcn. J. J. O'Brien's Saxon 1, 16-16-16, sd 2659 ft. Ohio Oil Co.'s Crain 3, 1-17-14, set 6⅝-in at 2988 ft; Crain 4, 1-17-14, dk; Crain 5, 1-17-14, set 6⅝-in at 3044 ft; Crain 6, 1-17-14, dr 212 ft; Crain 7, 1-17-14, rig; Goode 1, 2-17-14, rig; Goode 2, 1-17-14, lcn; Pumphrey 1, 1-17-14, set 6⅝-in at 2986 ft; R. Pumphrey 1, 2-17-14, set 10-in at 313 ft; R. Pumphrey 2, 2-17-14, set 10-in at 313 ft; R. Pumphrey 2, 2-17-14, set 10-in at 338 ft; R. Pumphrey 3, 2-17-14, rig. Pitcher et al's Arkansas Timber Co. 1, 21-17-11, lost hole at 1070 ft, moved over and began second hole, set 15½-in at 39 ft. Pitcher & White's Kinard 1, 17-19-15, dr 163 ft. Rice et al's Newton 1, 13-17-16, sd 3154 ft. Rovenger Oil Corp.'s Harrel 4, 15-17-16, dk; McCain 1, 4-17-14, coring 3064 ft. Sun Oil Co.'s Hays 3, 3-16-15, sd 2275 ft. Standard's Murphy 33, 4-16-15, sd 2585 ft. Wingfield et al's Greer 1, 15-19-13, sd 50 ft. E. N. Wood's Houston 1, 12-16-16 (formerly Thurmand et al's Houston 2), arr to deepen 2558 ft.

OKLAHOMA

T 28n, R 3w, Grant County—Sec 6, Otstot Dev. Co.'s Snyder 1, ne c, sd 4518 ft.

T 27n, R 21w, Harper County—Sec. 24, A. F. Koplan Oil Co.'s Selman 1, ne c se, spd and sd.

T 27n, R 15w, Woods County—Sec 20, Sooner State Oil Co. & E. R. Black's Marcum 1, c sw, spd and sd.

T 27n, R 5w, Grant County—Sec 18, J. W. Bailey et al's Custard 1, c se, sd 4605 ft.

T 27n, R 1e, Kay County—Sec 8, Mathews et al's Buessing 1, nw c, cellar.

T 27n, R 1e, Kay County—Sec 28, Hazel Atlas Glass Co.'s Vickery 2, nw c se se nw, lcn.

T 26n, R 4w, Grant County—Sec 34, Sooner State Oil Co.'s Royce 1, sw c nw, sd 550 ft.

T 26n, R 3w, Grant County—Sec 16, Markham & Flanagan's Sherrer 1, ne c sw, tools in hole, 5369 ft.

T 26n, R 2e, Kay County—Sec 32, J. A. Vincent et al's McNeal 1, sw c, ne, fsh 2795 ft.

T 25n, R 22w, Harper County—Sec 14, Hoffer Oil Co.'s Cooper 1, nw c se, sd 4182 ft.

T 25n, R 4w, Grant County—Sec 22, Cowden et al's Vallner 2, ne c se ne sw, dr 5420 ft.

T 25n, R 1w, Kay County—Sec 15, Tonkawa Dev. Co.'s McDaniels 1, se c ¶1 at 3980-88 ft, 200 ft oih, td 4198 ft, sd.

T 25n, R 1e, Kay County — Sec 10, Miller Bros.' Anderson 1, nw c se, hfw 2565-90 ft, dr 2806 ft.

T 21n, R 1w, Noble County—Sec 7, R. L. Corley's Williams 1, se c ne sw, sd 1920 ft.

Oklahoma Panhandle

T 6n, R2e, Cimarron County—Sec 24, J. G. Phillips' School Land 1, nw c, sd 3707 ft.

T 5n, R 2e, Cimmarron County—Sec 22, Sinclair's School Land 1, nw c, dr 4333 ft.

T 5n, R 5e, Cimmaron county—Sec 27, Ramsey Brothers' State 1, c nw ne, show 35 bbls, shot 30 qts 4090-4140 ft, dr 4574 ft.

T 5n, R 6e, Cimarron County—Sec 4, Ramsey Pet. Co.'s School Land 1, se c, sd 4265 ft.

T 4n, R 1e, Cimarron County—Sec 34, Ramsey's School Land D1, c se, dr 1479 ft.

T 4n, R 25e, Beaver County—Sec 22, O. H. Bonner et al's Maple 1, c se ne, rig.

T 3n, R 7e, Cimarron County—Sec 25, Gladys Belle Oil Co.'s Israel 1, sw c ne, td 4392 ft, plugging.

T 2n, R 9e, Cimarron County—Sec 2, Fenton, Brookins & Flowers' Smaltz 1, sw c ne ne, spd and sd.

T 2n, R 18e, Texas County—Sec 23, Connelly, Trammell & Danner's Graves 1, ne c sw sw, sd 315 ft.

T 1n, R 15e, Texas County, Sec 26, Hydraulic Oil Co.'s Hitch 1, ne c, sd 600 ft.

T 1n, R 19e, Texas County—Sec 11, Trammell, Connelly & Danner's Tansey 1, se c nw, sd 280 ft.

T 1n, R 18e, Texas County—Sec 11, Three Way Oil Co.'s Price 1, se c nw, show gas 2560-2620 ft, sd 3005 ft.

T 24n, R 17w, Woodward County—Sec 32, Otstot Dev. Co.'s Simmons 1, se c, sd 1500 ft.

T 24n, R 6w, Garfield County—Sec 9, Pulse &

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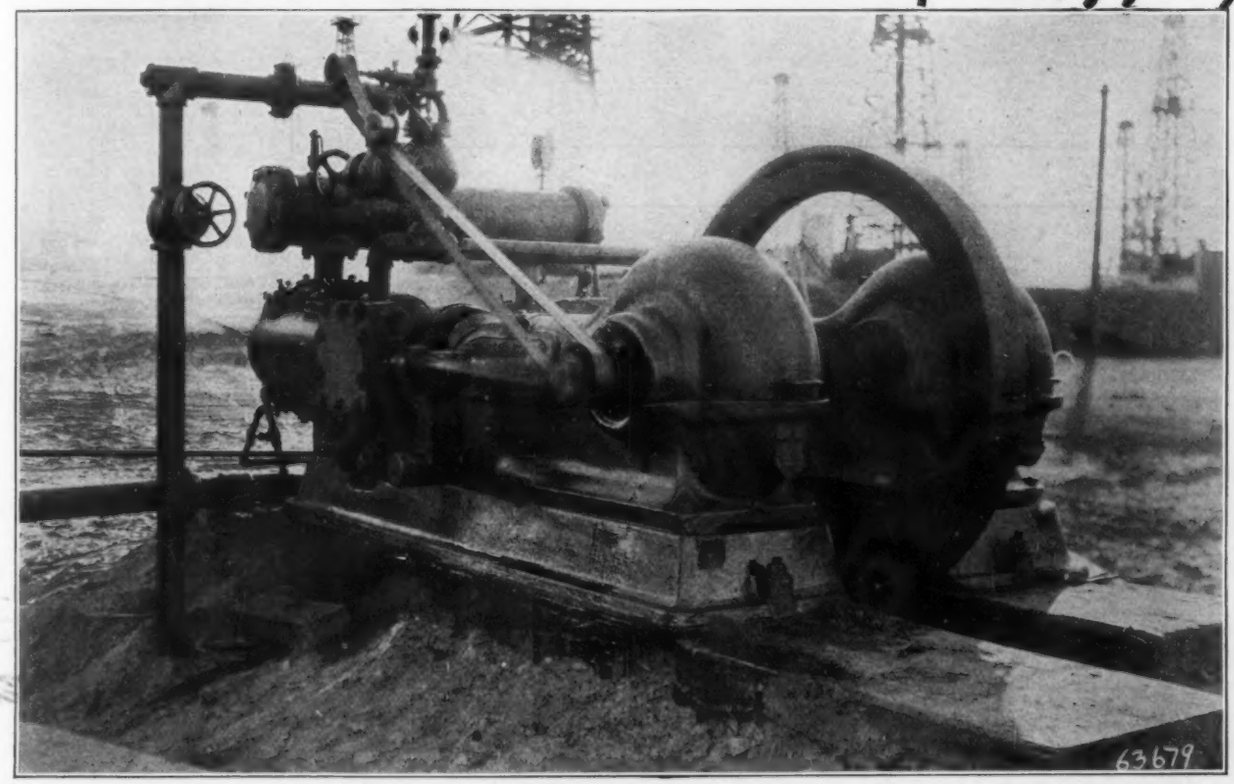

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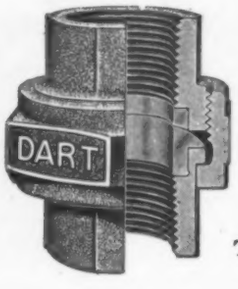

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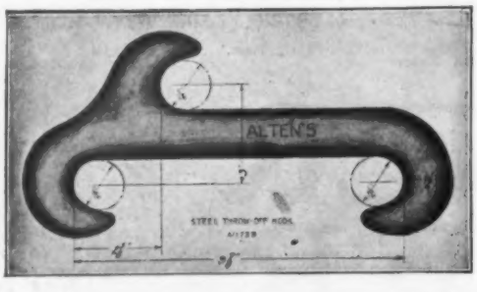

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T 23n, R 16w, Major County—Sec 4, Henry Landon's Parker 1, ne c nw, sd 1150 ft.

T 22n, R 5w, Garfield County—Sec 3, Ashby & Barr's Swinery 1, nw c, sd 740 ft.

T 21n, R 25w, Ellis County—Sec 9, Oklahoma Northern Oil Co.'s 1, c se nw, cas stuck 300 ft.

T 21n, R 21w, Woodward County — Sec 25, Sharon et al's Elmore 1, sw c, sd 2778 ft.

T 21n, R 5w, Garfield County—Sec 31, A. E. Summers' Vanderwork 1, ne c nw, plugged and abnd, td 1665 ft.

T 21n, R 4w, Garfield County—Sec 12, Beopple et al's Shriver 1, c e l sw sw ne, sd 1850 ft.

T 20n, R 5w, Garfield County—Sec 2, Sinclair's Fee 1, sw c ne, fsh tools 6254 ft.

T 20n, R 4w, Garfield County—Sec 9, Marland Oil Co.'s Looman 1, ne c se, dr 5638 ft.

T 20n, R 4w, Garfield County—Sec 12, Marland Oil Co.'s Miller 1, sw c sd 4586 ft.

T 19n, Range 4w, Logan County — Sec 8, Champlin Ref. Co.'s Musgrove 1, se c sw, dr 1864 ft. Sec 33, Bryan & Emery's 1, nw c se, reaming hole 4504 ft.

T 18n, R 15w, Dewey County—Sec 9, Huckelby & McCoy's Perfect 1, ne se, 3274 ft.

T 18n, R 4w, Logan County—Sec 11, Welch, Acton & Brown's Hall 1, ne c se, top pay 4750-68 ft, made one flow.

T 18n, R 3w, Logan Sec 33, Haley & Pioneer Pet. Co.'s Quier 1, sw c se, fsh cas 3690 ft.

T 17n, R 1e, Logan County—Sec 20, T. B. Slick's Signs 1, nw c sw, sd 5067 ft, tools moved out.

T 17n, R 1e, Logan County—Sec 28, T. B. Slick's Berry 1, sw c se, sand 4658-61 ft, 2800 ft oih, show wtr, ur 6-in 5194 ft.

T 16n, R 7w, Kingfisher County—Sec 6, Pet. Eng. Core Drlg Co.'s Campbell 1, c nw se, rig.

T 16n, R 5w, Kingfisher County—Sec 26, Galt Brown Oil Co.'s Johnson 1, c nw, ur 6-in 2926 ft.

T 16n, R 1w Logan County—Sec 28, Blackford O&G Co.'s Lair 1, c s l n½ se, sd 1675 ft.

T 15n, R 1w, Logan County—Sec 12, Bu Vi Bar Pet. Co.'s Kirkpatrick 1, c sw, co 3865 ft.

T 14n, R 6w, Canadian County—Sec 9, A. D. Spear's Piatt 1, se c ne, sd 3223 ft.

T 13n, R 10w, Oklahoma County—Sec 18, Carrell Oil Corp.'s North 1, ne c, sd 1500 ft.

T 13n, R 3w, Oklahoma — Sec 18, Slick & Bailey's Lufkin 1, c ne se, td 3750 ft, rust.

T 12n, R 3w, Oklahoma County — Sec 15, Cromwell O&G Co.'s Thompson 1, sw c ne ne, dr 6040 ft.

T 10n, R 6w, Canadian County—Sec 1, J. V. Bailey's Robinson 1, c ne nw, spd and sd.

T 27n, R 9e, Osage County—Sec 7, C. B. Peters 1, ne c se, dr 400 ft.

T 26n, R 8e, Osage County—Sec 13, Stephenson, Henry & Rock's 1, sw c nw sw, rig.

T 25n, R 7e, Osage County—Sec 8, I. T. I. O. Co.'s 1, se c ne, lcn. Sec 22, Geo. Parker's 1, c s l ne, dr 1550 ft.

T 23n, R 10e, Osage County—Sec 7, Sheeders O&G Co.'s 1, c se, sd 2300 ft, tools in hole.

T 21n, R 6e, Pawnee County—Sec 16, F. R. Billingslea & 101 Ranch Co.'s School Land 1, nwc ne, se, dr 2965 ft.

T 18n, R 3e, Payne County—Sec 32, Garber, Pulse & Gloyd's Widows 1, ne c se nw, sd 1200 ft.

T 17n, R 3e, Lincoln County—Sec 20, Willis O&G Co.'s Gunn 1, nw c se, td 4677 ft, water, sd.

T 14n, R 7e, Creek County—Sec 16, Bu Vi Bar Pet. Co.'s Nero 1, c se ne, fsh two strings tools at 400 ft.

T 13n, R 4e, Lincoln County—Sec 16, Bu Vi Bar Pet. Co.'s School Land 1, c se ne, sd 4500 ft.

T 12n, R 8e, Okfuskee County—Sec 34, Transcontinental Oil Co.'s Knight 1, nw c ne nw, dr 1800 ft.

T 19n, R 10e, Tulsa County—Sec 24, Holmes et al's Ragen 1, nw c ne se, sd 850 ft.

T 19n, R 11e, Tulsa County—Sec 33, Anadarko Western Oil Co.'s Hodge 1, nw c ne nw sw, 2525 ft, hfw, setting 6-in cas.

T 17n, R 13e, Tulsa County—Sec 1, E. A. Hawley's Taylor 1, se c ne, spd and sd.

T 16n, R 10e, Creek County—Sec 35, Mutra & Cole's Fore 1, ne c sw, dr 1300 ft.

T 15n, R 9e, Creek County—Sec 33, C. G. Tibbens' Marshall 1, sw c se sw, machine.

T 14n, R 9e, Creek County—Sec 1, L. C. Wheeler & King's Morton 1, se c nw, lcn.

T 14n, R 11e, Okmulgee County—Sec 19, White Eagle O&R Co.'s Bugg 2, nw c ne se, rog.

T 13n, R 9e, Okfuskee County—Sec 21, Barnsdall Oil Corp.'s Self 1, sw c se ne, ur 10-in cas 1637 ft.

T 12n, R 10e, Okfuskee County—Sec 8, Blakely et al's M. Yarhola 1, sw c se nw, dr 2612 ft.

T 11n, R 10e, Okfuskee County—Sec 4, Moose & Daniels' Stidham 1, sw c nw, sd 622 ft.

T 19n, R 15e, Wagoner County—Sec 11, J. H. Winters' Lynch 1, sw c nw nw, sd 250 ft.

T 18n, R 17e, Wagoner County—Sec 1, Towner & White's J. Lucky 1, sw c se nw, dr 725 ft.

T 15n, R 13e, Okmulgee County—Sec 6, Farrell & Lavery Scott 1, nw c se, dr 2093 ft, show ¶5 2090-2093 ft.

T 15n, R 18e, Muskogee County—Sec 12, C. F. Finefield's Jobe 1, nw c se, dr 1252 ft.

T 11n, R 13e, Okmulgee County—Sec 27, G. N. Buzzard et al's Thompson 1, nw c ne ne, dr 659 ft.

T 13n, R 17e, Muskogee County—Sec 34, Elk Drlg. Co.'s McKee 1, c s l se se se, sd 160 ft.

T 13n, R 19e, Muskogee County—Sec 4, W. R. Sommerville's Carver 1, ne c se, ¶2 898-912 ft, show oil 1495-1513 ft, sd 1620 ft.

T 11n, R 16e, McIntosh County—Sec 36, J. E. Weible's Bruner 1, sw c se nw, dr 1710 ft.

T 9n, R 16e, Pittsburg County—Sec 32, Pattison et al's Smith 1, ne c sw e, sd 3365 ft.

T 9n, R 18e, Haskell County—Sec 10, Marion Oil Co.'s Sanders 1, nw c ne sw, dr 1800 ft.

T 5n, R 18e, Latimer County—Sec 15, Limestone O&G Co.'s Murray 1, sw c, sd 1505 ft.

T 11n, R 2e, Pottawatomie County — Sec 22, Wilcox O&G Co.'s Hollis 1, sw c, dr 4780 ft.

T 10n, R 2w, Cleveland County—Sec 22, Cromwell & Franklin's Donovan 1, c sw, sd 4706 ft.

T 10n, R 3e, Pottawatomie County—Sec 12, Sikes, Kilgore & Shaffer O&R Co.'s Ives 1, c se se, sd 4130 ft.

T 10n, R 4e, Pottawatomie County—Sec 28, Central National Oil Co.'s Toney 1, sw c, dr 3520 ft.

T 10n, R 5e, Pottawatomie County—Sec 16, Clark, Edwards et al's School Land 1, ne c sw, hfw 4022-50 ft, dr 4142 ft.

T 10n, R 5e, Seminole — Sec 26, Sory & Swartz's Turner 1, se c sw se, top Wilcox 4647 ft, td 4650 ft, hfw, sd.

T 10n, R 7e, Seminole County—Sec 21, Gypsy Oil Co.'s Soloman 1, se c ne, ts 3730 ft, td 3734 ft, pinched in to 210 bbls.

T 9n, R 1w, Cleveland County—Sec 7, Galt Brown Oil Co.'s Alexander 1, c nw, hfw 4212-80 ft, hfw, swedging 6-in cas 4299 ft.

T 9n, R 2e, Pottawatomie County—Sec 2, McCulloch's Scott 1, ne c sw, td 5134 ft, pulling cas to plug.

T 9n, R 4e, Pottawatomie County—Sec 27, W. B. Pine's Hamblin 1, ne c se se, cmtg, td 4602 ft.

T 9n, R 5e, Pottawatomie County—Sec 32, Independent O&G Co.'s Harber 1, ne c, ts 4835 ft, td 4848 ft, 2500 ft water, dr.

T 9n, R 7e, Seminole County—Sec 15, Pure Oil Co.'s Jonah 1, nw c ne, ts 3492 ft, 10 bbls oil, td 3516 ft, pb 3510 ft, sd.

T 9n, R 8e, Seminole—Sec 3, Empire G&F Co.'s Butler 1, sw c se, td 3508 ft, td 3560 ft, water, pb to 3525 ft, ¶10 and 10 bbls oil per day, sd.

T 8n, R 1e, Cleveland County—Sec 20, Mid-Cont. Pet. Corp.'s Woodrow 1, sw c nw, sd 4725 ft.

T 8n, R 2e, Pottawatomie County—Sec 24, Superior Oil Corp.'s Jones 1, sw c nw ne, dr 4000 ft.

T 8n, R 5e, Seminole County—Sec 14, Barnsdall Oil Corp.'s Fife 1, ne c nw, 8-in at 3891 ft.

T 8n, R 5e, Pottawatomie County—Sec 16, I. T. I. O. Co.'s School Land 1, se c sw, sd 4096 ft.

T 7n, R 1w, Cleveland County—Sec 15, Sooner Oil Co.'s Vandeer 1, ne c nw sw, cmtd 8-in 2995 ft, sd.

T 7n, R 6e, Seminole County—Sec 7, Simon & Beam, Palmer 1, ne c nw ne, rig. Sec. 13, Snowden & McSweeney's Tiger 1, nw c, dr 4020 ft.

T 7n, R 7e, Seminole County—Sec 5, Mid-Cont. Pet. Corp.'s Smith 1, nw c ne, top Wilcox 443 ft, td 4444 ft, est 60 bbls per hour, shut

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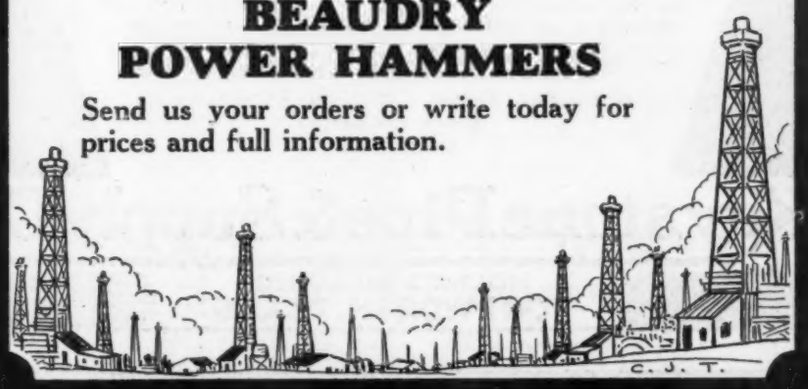

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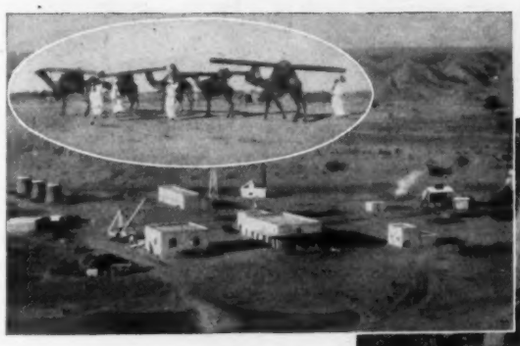

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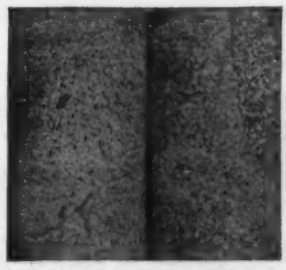

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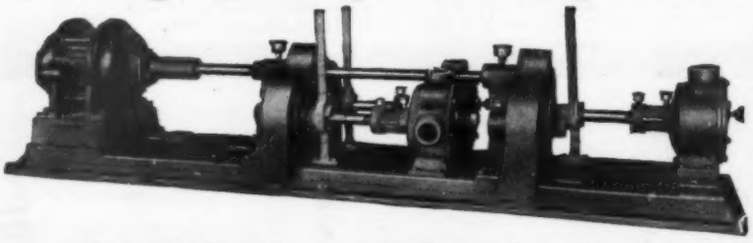

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in for tankage. Sec 32, I. T. I. O. Co.'s Marshall 1, nw c sw, dr 4025 ft.

T 7n, R 8e, Hughes County—Sec 21, Jarvis & Holmes' Street 1, nw c se nw, 3090-3100 ft, 300 ft oih 3113-28 ft, 1500 ft oih, dr 3140 ft.

T 6n, R 1w, Cleveland County—Sec 11, Magnolia's Lefore 1, se c sw, sd 4180 ft.

T 6n, R 2e, Pottawatomie County — Sec 10, Davis, Detrick et al's McGahey 1, se c nw, sd 4988 ft.

T 6n, R 6e, Seminole County—Sec 1, T. B. Slick's Moore 1, sw c ne sw, show oil and gas 2408-12 ft, dr 2442 ft.

T 6n, R 7e, Seminole County—Sec 5, Magnolia Pet. Co.'s Vierson 1, se c nw, dr 3247 ft.

T 6n, R 8e, Seminole County—Sec 18, Carter Oil Co.'s Phillips 1, nw c ne nw, owd, dr 3475 ft.

T 5n, R 9e, Hughes County—Sec 20, Noble O&G Co.'s et al's Wicket 1, se c, sp.

T 9n, R 22w, Beckham County—Sec 32, O&H Co.'s et al's Wicket 1, se c, sp.

T 9n, R 22w, Beckham County—Sec 32, O&H Pet. Co.'s Barnes 1, nw c ne, owd, sd 2560 ft, small show oil 2210 ft.

T 9n, R 5w, Grady County—Sec 13, Remington et al's Fulton 1, sw c ne, sd 720 ft.

T 8n, R 23w, Beckham County—Sec 5, Prince Bros.'s Martin & Atlantic 1, c sw nw, sd 2350 ft.

T 7n, R 22w, Greer County—Sec. 16, Magnolia's Chiney 1, ne c dr, 2305 ft.

T 7n, R 5w, Grady County—Sec 13, Bedman et al's Kemp 1, c sw ne, sd 2400 ft.

T 6n, R 10w, Caddo County—Sec 22, English Drlg. Co.'s Jacobs 1, nw c se, dr 2800 ft.

T 6n, R 12w, Caddo County—Sec. 29, W. J. Hartley's Gilbreath 1, se c nw se, owd, sd 3394 ft.

T 5n, R 7w, Grady County—Sec 7, Nichols & Page's Drake 1, c e l se, sd 1900 ft. Sec 16, John Graham's Steelman 1, c n l nw nw, dr 2820 ft.

T 2n, R 10, Comanche County—Sec 10, Danciger O&R Co.'s Skitler 1, ne c se, dr 1950 ft.

T 1s, R 5w, Stephens County—Sec 8, Magnolia's Parker 1, nw c ne sw, dr 3475 ft.

T 2s, R 16w, Kiowa County—Sec 6, Lanfair et al's 1, se c sw se, sd 2263 ft.

T 3s, R 6w, Stephens County—Sec 11, Dameron et al's Florence 1, ne c nw se, abnd 850 ft.

T 5n, R 7e, Pontotoc County—Sec 36, Shaffer O&R Co.'s Gilcrease 1, nw c ne, gas 2280-2310 ft, td 2340 ft, flowed 150 bbls per day, lost hole, skid rig for new hole.

T 5n, R 4e, Pontotoc County—Sec 12, Gillespie et al's Fleming 1, sw c se, swab 50 bbls 2043-54 ft, 25 bbls at 2556-57 ft, hfw, in Wilcox 2838-52 ft, pb 2550 ft, sd.

T 5n, R 9e, Hughes County—Sec 20, Noble O&G Co.'s Wicket 1, sec, sp.

T 4n, R 1e, Garvin County—Sec 15, Dixie Oil Co.'s Perkins 1, se c nw, cmt 8-in 3805 ft, rust.

T 4n, R 3e, Garvin County—Sec 10, Garland Oil Co.'s Strickland 1, sw c nw, sw, ur 6-in cas 2450 ft, td.

T 4n, R 4e, Pontotoc County—Sec 10, Marland Oil Co.'s Lawrence 1, c sw se, bldg rig.

T 4n, R 6e, Pontotoc County—Sec 35, Bowles et al's Rayborn 1, sw c se, sd 1320 ft.

T 4n, R 7e, Pontotoc County—Sec 14, Henry et al's Johnson 1, ne c sw, sd 758 ft. Sec. 25, Ada Cement Co.'s Patter 1, nw c, sp.

T 3n, R 1e, Garvin County—Sec 12, Magnolia Pet. Co.'s Vaughn 1, nw c sw nw, ur 5-in 4375 ft.

T 1n, R 2e, Murray County—Sec 17, Revels & McGee's M. Wolfe 1, nw c, sd 125 ft.

T 1n, R 8e, Coal County—Sec 35, W. E. McGraw et al's Patton 1, sw c se ne, sp.

T 1s, R 2w, Carter County—Sec 19, McGahee Morris 1, sw c nw ne, sd 3463 ft.

T 1s, R 2e, Murray County—Sec 27, Thompson Oil Corp.'s Freeman 1, se c, rig.

T 4s, R 1w, Carter County—Sec 33, Magnolia's Simpson 1, nw c ne nw, dr 4265 ft.

T 4s, R 2w, Carter County—Sec 13, Roxana Pet. Corp.'s Sarasota 1, se c, 2250 ft, dr bad hole.

T 5s, R 3w, Carter County—Sec 2, Roxana's Frazier 1, sw c ne, sd 3445 ft.

T 5s, R 4e, Marshall County—Sec 11, Bilbo et al's Chapman 1, ne c nw, ne, sd 380 ft.

T 5s, R 7e, Bryan County—Sec 26, Magnolia's Marshall 1, nw c sw nw, dr 1985 ft.

T 7s, R 3e, Love County—Sec 7, Magnolia Pet. Co.'s Askew 1, nw c sw ne, dr 2495 ft.

KANSAS

BARBER COUNTY—T 30s, R 14w, Rowland et al's Pickens 1, owd, ne c nw, ne, sec 27, dr 2010 ft. T 21s, R 12w, Merriman et al's Winters 1, c e½, sec 17, fsh 2425 ft. T 33s, R 12w, Schaffer et al's Boggs 1, c sw, sec 19, dr 3645 ft. T 33s, 13w, Schaffer et al's Carter 1, c se se, sec 2, dr 2705 ft.

BARTON COUNTY—T 18s, R 12w, Huffine & Crane's Everleigh 1, c sw sw, sec 6, dr 4196 ft. T 19s, R 11w, Huffine et al's Smith 1, ne c se ne, sec 17, fsh 5090 ft. T 20s, R 13w, Everett & Wiley's Ward 1, nw c sw, sec 12, sd 3915 ft.

BUTLER COUNTY—T 25s, R 4e, Wichita Drlg. Co.'s Joseph 1, ne c se nw, sec 18, dr 1750 ft. T 27s, R 3e, La Rob Oil Co.'s Baysinger 1, ne c sw, sec 24, rig. T 27s, R 5e, Cress, Frank et al's Bryson 1, ne c, sec 26, spd and sd. T 29s, R 4e, E. Wilcox et al's Holcomb, 1, ne c se nw, sec 21, sd 1456 ft.

CHASE COUNTY—T 21s, R 7e, Greener, Fowler et al's Carson 1, ne c sec 9, sd 750 ft.

CHAUTAUQUA COUNTY—T 32s, R 8e, Roth & Faurot's Hamil 1, nw c sw nw, sec 15, lcn.

CLARK COUNTY—T 31s, R 23w, Walker & Walner's Mitchell 1, sw c ne, sec 16, sd 420 ft.

CLOUD COUNTY—T 6s, R 4w, Concordia Oil Co.'s Murdock 1, se c sec 6, ur 3590 ft.

COFFEY COUNTY—T 22s, R 15e, Garland et al's Goff 1, se c sw se, sec 9, lcn. Crooks et al's Douglas 1, ne c se, sec 11, sd 450 ft.

COWLEY COUNTY—T 30s, R 3e, Vickers Pet. Co.'s Daniels 1, nw c ne, sec 3, dr 1650 ft. T 30s, R 5e, Shawver et al's Myers 1, se c sw ne, sec 29, D&A 2356 ft. T 30s, R 6e, Allison & Fitzwilliams' Manley 1, ne c nw se sec 20, sd 450 ft. T 31s, R 4e, Brinn et al's Hughes 1, nw c sw, sec 20, dr 3120 ft. T 33s, R 4e, Roth & Faurot's Adams 1, se c sec 32, dr 1630 ft.

DICKINSON COUNTY—T 16s, R 4e, Skow & Ritchey's Will 1, c nw nw, sec 2, lcn. Frank et al's Kutler 1, sw c se, sec 15, sd 2654 ft. Loy et al's Sherman 1, nw c se, sec 24, dr 1885 ft. Harwood & Winters' Utek 1, sw c se nw, sec 35, dr 1365 ft.

ELK COUNTY—T 29s, R 12e, Elmwood Oil Co.'s & Phoenix Oil Co.'s Flack 1, se c sec 6, sd 500 ft. T 31s, R 11e, Roth & Faurot's Elk Falls Bank, nw c sw, sec 3, dr 850 ft.

ELLIS COUNTY—T 13s, R 16w, Tatlock et al's Leiker 1, nw c ne ne, sec 26, sd 2685 ft. Mid-West Ref. Co.'s Reidell 19, nw c sw se, sec 27, td 3870 ft, pb to 3243 ft, shot 20 qts., 5 bbls not complete.

ELLSWORTH COUNTY — T 15s, R 10w, Valerious O&G Co.'s Maximer 1, c nw, sec 9, dr 3059 ft. T 16s, R 9w, Phil-Mac Oil Co.'s Gregory 1, c sw, sec 24, ur 2985 ft.

FRANKLIN COUNTY — T 16s, R 18e, Smith, Trace & Fisher's Owens 1, c e l e½ e½, sec 17, sd 1450 ft. T 17s, R 17e, Omar O&R Co.'s Bush 1, se c sw, sec 25, lcn.

GEARY COUNTY—T 10s, R 5e, Brinkley et al's Fawley 1, ne c nw ne, sec 16, sd 2502 ft.

GREENWOOD COUNTY — T 23s, R 12e, Jennings et al's Hollis 1, nw c, sec 5, sd 2415 ft. T 25s, R 10e, Smalley & Bement Oil Corp.'s Rockhill 1, nw c ne, sec 12, dr 1010 ft. T 27s, R 13e, O. W. Culp et al's Lesseny 1, sec ne ne, sec 33, D&A 1790 ft. T 28s, R 12e, Swason et al's Hayes 1, se c nw ne, sec 1, sd 1600 ft.

GRAHAM COUNTY—T 8s, R 25w, Gulf Coast Drlg. Co.'s St. John 1, owd, sw c nw se, sec 27, dr 3260 ft.

JEFFERSON COUNTY — T 9s, R 19e, Northern Counties Oil Co.'s Edwards 1, se c nw nw, sec 13, sd 2405 ft.

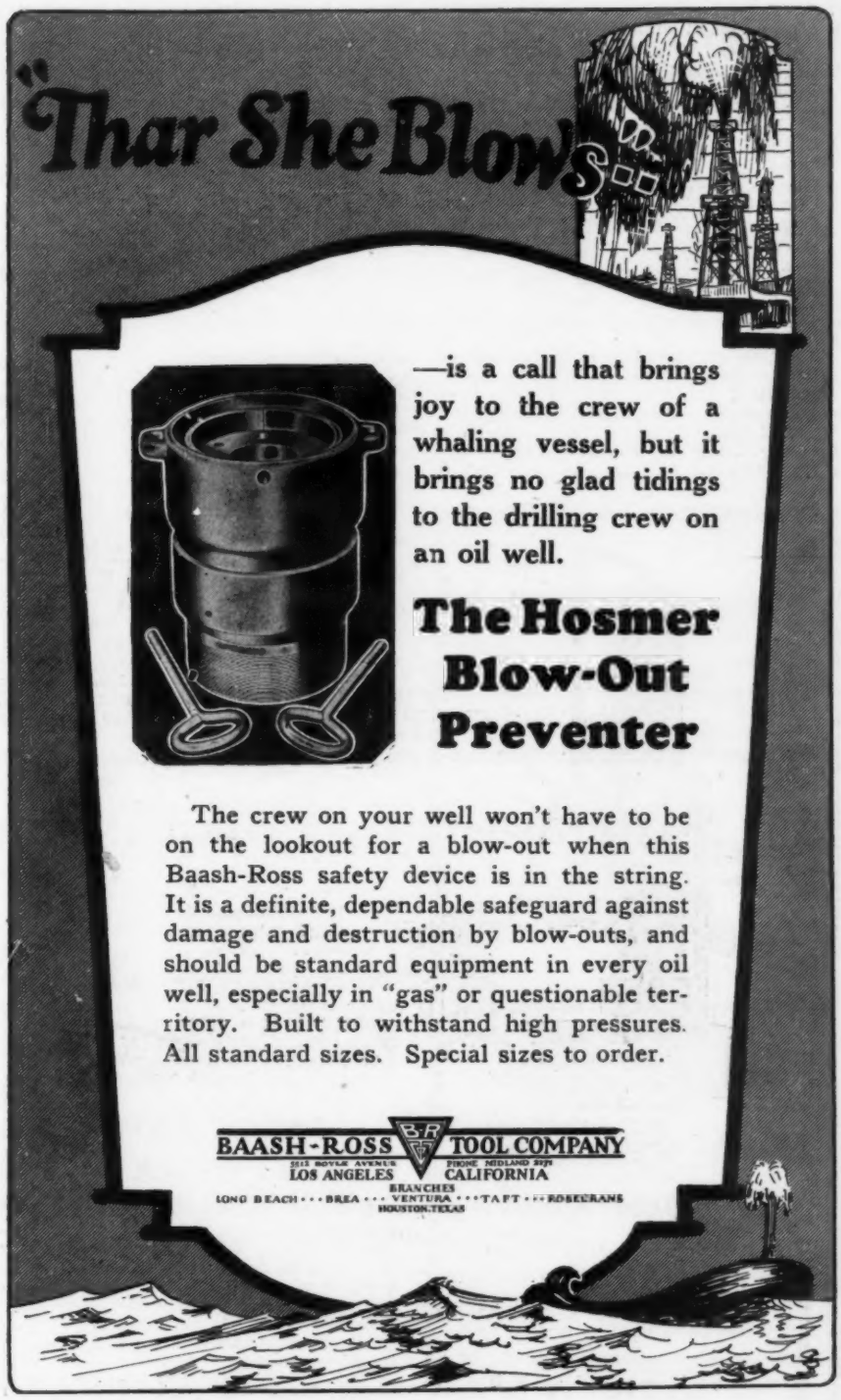
LABETTE COUNTY—T 33s, R 17e, Cowell et al's Hornbeck 1, sw c ne sw, sec 1, sd 1375 ft. T 35s, R 20e, Wantland et al's Lipps 1, se c nw sw, sec 5, sd 910 ft.

LOGAN COUNTY—T 14s, R 13w, Coon et al's Andersw, owd, nw c ne, nw, sec 14, sd 3885 ft.

LYON COUNTY—T 21s, R 10e, Hawks et al's Schroeder 1, se c sw, sec 14, lcn.

MARSHALL COUNTY—T 4s, R 7e, Marshall Oil Synd.'s Finn 1, nw c ne ne, sec 4, sd 2140 ft.

MARION COUNTY—T 17n, R 4e, Givins et al's Ucker 1, sw c ne, sec 31, fsh tools 1710 ft. T 18s, R 4e, Skow et al's Melcher 1, c ne se, sec 20, sd 1825 ft. T 19s, R 4e, Franks et al's Urich 1, sw c nw nw, sec 9, rig abnd. Reed et al's Reed 1, nw c, sec 17, td 2841 ft, pb to 2406 ft, sd. T 20s, R 4e, Empire O&R Co.'s Schlothour 1, ne c sw ne, sec 9, dr 2385 ft.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T 21s, R 1e, Sun Ray Oil Co.'s Lehrman 1, sw c ne se, sec 1, sd 1985 ft.

McPHERSON COUNTY—T 17s, R 3w, La Mar et al's Lamar 1, se c, sec 1, ur 2885 ft. T 19s, R 2w, Merriman et al's Clark 1, c ne nw, sec 8, Chat 3007 ft, dr 3037 ft. T 19s, R 3w, Mid-Kansas' Jones 1, sw c ne, sec 26, dr 3590 ft. T 20s, R 3w, Polar Oil Co.'s Dary 1, c nw, sec 20, spd and sd.

MEAD COUNTY—T 33s, R 28 w, Blackwell O&G Co.'s Lilly 1, c se, sec 9, dr 3120 ft.

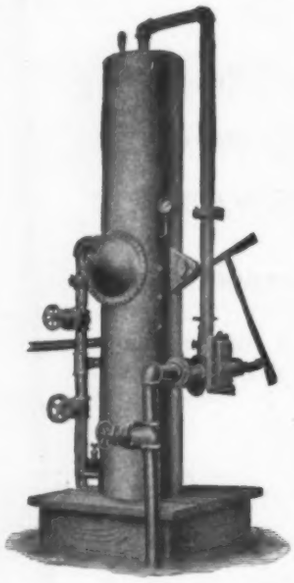
MONTGOMERY COUNTY—T 31s, R 14e, Ramler et al's Faler 1, c n l ne ne, sec 31, sd 1085 ft.

MORRIS COUNTY—T 14s, R 7e, Klein et al's Barber 1, se c nw, sec 32, rig. T 16s, R 9e, Lamber et al's Southard 1, sw c se, sec 22, lcn.

NEMEHA COUNTY—T 3s, R 11e, Nemeha O&G Co.'s Meyers 1, nw c, sec 19, sd 3050 ft.

OSBORNE COUNTY—T 9s, R 15w, Davis et al's Prather 1, se c sw, sec 30, dr 350 ft.

OSAGE COUNTY—T 15s, R 15e, Barber et al's Lease 1, c se se, sec 3, sd 260 ft. West et al's Bailey 1, sw c ne, sec 27, sd 800 ft.



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Montana

T 17s, R 17e, Mull Vit Dev. Co.'s Neil 1, nw c ne sw ne, sec 8, sd 3736 ft.

POTTAWATOMIE COUNTY—T 9s, R 12e, Crawford et al's Steward 1, c n l se se, sec 17, rig. Crawford et al's Bratchbar 1, sw c se sw, sec 31, rig. T 10s, R 12e, Crawford et al's St. Mary 1, sw c, sec 11, sd 2920 ft.

RENO COUNTY—T 22s, R 4w, Danciger et al's Williams 1, ne c sw se, sec 6, rig.

RILEY COUNTY—T 10s, R 7e, Youker et al's Theirer 1, nw c, sec 20, dr 3021 ft.

ROOKS COUNTY—T 9s, R 16w, Keys Pet. Co.'s Rathburn 1, ne c sw, sec 14, spd and sd. 2 10s, R 16w, Derby Oil Co.'s Kruse 1, ne c nw ne, sec 3, sd 2930 ft. Streeter & Stearns Mattison 1, c nw, sec 28, dr 978 ft.

RUSH COUNTY—T 17s, R 17w, Valerious O&G Co.'s Schreverman 1, c nw, sec 27, spd and sd.

SALINE COUNTY—T 15s, R 2w, Menter O&G Co.'s Muir 1, sw c, sec 17, dr 2430 ft.

STAFFORD COUNTY — T 21s, R 11w, Harper et al's Siffers 1, owd, nw c sw ne, sec 23, sd 2936 ft.

STEPHENS COUNTY—T 33s, R 37w, Independent O&G Co.'s Jones 1, c sw, sec 31, td 3505 ft, pb.

SUMNER COUNTY—T 33s, R 3w, Otstot et al's Bartlow 1, se c, sec 22, sd 1850 ft. T 34s, R 2w, Gypsy Oil Co.'s Douglas 1, ne c se nw, sec 23, ts 4493-4499 ft, 16 bbls per hour. T 34s, R 3w, Jarvis et al's Wenrich 1, se c sw, sec 4, sd 3570 ft. T 34s, R 4w, Jarvis et al's Wycoff 1, sw c nw, sec 11, dr 2680 ft. T 35s, R 1e, Otstot et al's Volker 1, nw c ne, sec 9, rig.

WABUNSEE COUNTY—T 12s, R 11e, Empire O&G Co.'s Schwalm 1, se c, sec 19, f/h 3320 ft. T 13s, R 12e, Williams et al's Henderson 1, ne c sw ne, sec 15, sd 3600 ft.

WOODSON COUNTY—T 25s, R 14e, Howard et al's Riley 1, nw c sw, sec 31, lcn.

LOUISIANA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
CADDO PARISH—		
Ohio Oil Co., Aaron B. Land Co. 1, 32-23-16	*	1553
Standard, Helpman 54, 16-21-16	*	2398
RICHLAND PARISH—		
Oliver et al, Hatch 1, 2-15-5e	*	2316
WEST CARROLL PARISH—		
Phillips Pet. Co., Darnell 1, 32-20-9e	*	3003
WINN PARISH—		
H. M. Roark, Southern Mineral Co. 3, 19-11-3w	*	525

BIENVILLE PARISH—E. J. Forrest's Perritt 1, 11-17-6, sd 2520 ft. Lake Bistineau Gas Co.'s State 1, 16-16-10, coring 2526 ft. Louisiana Pet. Co.'s Hayes 1, 18-16-5, sd 2450 ft.

BOSSIER PARISH — Arkansas Nat. Gas Co.'s Barnett 1, 17-23-12, set 12-inch at 309 ft. Autrey Oil Co.'s Snyder 3, 22-19-11, set 10-inch at 40 ft. Bahan & Davis' Dodson 1, 15-23-12, tested 5 mil ft gas and 500 bbls fluid 80 per cent sw at 3103 ft. Belchic & Laskey's G. W. Roberson 1, 22-23-12, set 12½-inch at 301 ft. Doern et al's Bollinger 1, 9-22-11, coring 3076 ft. H. S. Goodwin Tr.'s Curtis 1, 2-16-13, blew in 5-10 mil ft gas and 5000 bbls sw at 2604 ft. Hamiter et al's Hamiter 1, 10-23-13, dr 50 ft. Humble's B. & W. 30, 15-19-11, fsh 4612 ft. Magnolia's Roberson 1, 26-23-12, arr to set 8⅛-inch at 3057 ft. J. C. McCullough Tr.'s Hodges 4, 25-16-12, testing 1568 ft. O'Brien Bros.' Dodson 1, 22-23-12, 15 mil ft gas at 3095 ft; Farrington 1, 21-23-12, rig. Palmer Corp.'s Burk 1, 26-17-12, set 12½-inch 232 ft. R. O. Roy's Werner 1, 7-17-11, dk. Sales & Walker's Bollinger 3, 30-23-11, wosr 3091 ft. Walker et al's Antrim 1, 28-23-12, dr 2425 ft. Woodley & Collins' L. & A. 3, 15-23-12, fsh 3087 ft.

CADDO PARISH—Arkansas Fuel Oil Co.'s Lane 1, 13-21-15, tested sw at 3042 ft; Lane 2, 13-21-15, sd 3865 ft. Bussa & McGoldrick's Bickham 7, 28-21-15, wosr 1603 ft. J. W. Burton Tr.'s Caldwell 8, 18-21-15, dk. W. D. Chew's Fee 7, 23-21-16, set 10-inch at 100 ft. Dixie Oil Co.'s C. M. L. 9, 23-21-15, dr out cement 3909 ft; Clark 9, 14-21-15, arr to set 6⅝-inch 3669 ft; Robertshaw 90, 14-21-15, pulling 6¼-inch 3683 ft; Robertshaw 91, 14-21-15, dk; Robertshaw 92, 13-21-15, dr 2310 ft; Huckaby 4, 11-21-15, dr 3140 ft. Ferguson et al's Abney 1, 7-17-16, set 10-inch 60 ft. Gulf's Herndon 10, 15-21-15, fsh 3912 ft; Tyson 14, 14-21-15, coring 3926 ft. Greenwood Prod. Co.'s Cooper & Ellerbe 1, 15-18-14, arr to test 192[illegible] ft; Alexander 1, 27-18-16, dr 45 ft. Haynes Bros.' Spell 1, 15-21-15, coring 3853 ft; Spell 2, 15-21-15, sd 3092 ft. Magnolia's W. M. Bell 2, 6-17-16, dk; J. W. Furrh 1, 28-18-16, sd 1998 ft; J. Furrh 1, 32-18-16, coring 2518 ft; Dillon 18, 24-21-15, dk; Dillon 21, 23-21-15, lcn; Robertshaw 21, 23-21-15, coring 3890 ft; Robertshaw 22, 23-21-15, dr 3000 ft; Hampton A-9, 15-21-15, dr 3458 ft. Ohio Oil Co.'s Plum 1, 32-23-16, sd 1619 ft; Smith 25, 12-21-15, dr 5341 ft; Thompson 1, 32-23-16, dr 3161 ft. Palmer Corp.'s Sellington 1, 17-21-14, dr 4206 ft. Rogers & Jensen's Newton Smith 1, 22-20-16, lcn. Shreveport Oil Corp.'s Smith 1, 23-21-16, dk; State 2, 272-21-15, sd 2400 ft. Simplex Oil Co.'s Thomas et al 3, 15-20-15, wosr 2355 ft; Thomas et al 4, 15-20-15, wosr 2208 ft; Hunsucker 1, 15-20-15, set 10-inch at 60 ft. State Line Oil & Gas Co.'s Amerada-Sharp 1, 22-18-14, sd 925 ft (corrected depth). Standish Oil Co.'s Jolly 1, 22-22-15, cemented cavity at 1048 ft. The Texas Co.'s C. M. L. 47, 23-21-15, sd 3657 ft; C. M. L. 50, 23-21-15, setting 6¼-inch at 3850 ft; C. M. L. 51, 23-21-15, arr to set 4½-inch at 3942 ft; Mabry 10, 15-21-15, set 6¼-inch at 3830 ft; Herndon 7, 14-21-15, dk; Herndon 8, 14-21-15, set 15½-inch 200 ft; Herold 10, 14-21-15, dr 3895 ft; Raines 19, 15-21-15, set 4½-inch 3968 ft; Noel B-14, 14-21-15, blowing with air 3050 ft. Tubbs et al's Hines 1, 16-14-16, arr to set 6-inch 2268 ft. Woodley Pet. Co.'s Knight B-4, 2-15-12, set 6¼-inch 2460 ft. Woodley & Collins' McVey A-1, 23-19-14, arr to set 6-inch 2569 ft. Waterman Brick & Tile Co.'s Fee 1, 18-17-16, dk.

CALDWELL PARISH—Grayson Oil Co.'s Crockett 1, 6-12-4, sd 2692 ft.

CATAHOULA PARISH—S. D. Hunter's Tensas Delta 2, 21-9-7e, dr 2790 ft. Lochnager et al's Beazley 2, 26-9-6e, perforating casing at 2095 ft; McMillan 1, 29-8-6e, dr 2640 ft. Standard's Tensas 1, 23-8-5e, coring 2150 ft.

CLAIBORNE PARISH—El Dorado Chief Oil Co.'s Jones 1, 8-20-6e, dk. Magnolia's Lee 1, 16-22-8, dr 4615 ft.

DE SOTO PARISH—American Controlled Oil Co.'s Lanier 2, 5-11-11, set 6⅝-inch at 2668 ft. J. H. Askew's Richardson 2, 25-13-11, set 10-inch at 102 ft. Benson Oil Co.'s Wolf 1, 3-10-13, set 6⅝-inch at 2770 ft. Chal. Daniel's Frost Johnson 1, 1-11-16, sd 100 ft. Carlton Drilling Co.'s Stevens 1, 12-11-16, set 10-inch at 210 ft. Dixie Oil Co.'s Jenkins 1, 9-12-11, dr 5845 ft. J. W. Downey's Dickson 1, 23-14-13, set 12-inch at 100 ft. Foster et al's Johnson 1, 7-10-12, dr 650 ft. Hazlett-Simmons' Neely 2, 1-14-12, sd 600 ft. Magnolia's Logan 1, 17-10-

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Dividend No. 87

and makes a total of 151½ per cent paid to shareholders.

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12, cleaning out 3265 ft. R. O. Roy's Tracy 1, 3-13-13, dk. Reliance Drilling Co.'s Jones 1, 8-11-14, sd 2815 ft. Wingfield et al's Haygood 1, 18-10-12, sd 2400 ft. Pittsburgh O. & D. Co.'s Moore 3, (formerly T. R. Cowells) 12-11-6e, set 6-inch 2147 ft. Louisiana Pet. Co.'s Tensas 1, 11-11-6e, sd 1100 ft.

GRANT PARISH—W. D. Ball et al's Calhoun 1, 4-7-4w, set 10-inch at 110 ft. Swope et al's Fee 3, 18-9-1e, sd 1607 ft; Fee 5, 18-9-1e, dk.

LA SALLE PARISH—Elbert Pet. Co.'s Urania B-3, 7-10-2e, set 10-inch at 100 ft. Wingfield et al's Gibson 2, 2-9-1e, sd 3073 ft.

MADISON PARISH—W. S. Smith's Yerger 1, 1-16-4e, arr to deepen 1700 ft.

MOREHOUSE PARISH—Consolidated Pet. Co.'s Perry 1, 14-20-4e, set 12-inch at 186 ft. Keisker et al's Bonita Lbr. Co. 1, 10-23-9e, dk. Natural Gas Prod. Co.'s Tensas Delta 10, 27-22-4e, set 6-inch at 2155 ft. The Texas Co.'s Sivley 1, 22-20-6e, arr to abn 3820 ft. United Carbon Co.'s Atkins 1, 26-20-5e, dk.

NATCHITOCHES PARISH — Lawson & Pharris' Dave Delrie 1, 18-5-5, sd 1310 ft. Tate et al's Leopole 1, 4-10-10, lcn.

OUACHITA PARISH—Imperial O. & G Co.'s Tubbs 3, 13-19-3e, set 12-inch 188 ft. Jordan Drilling Co.'s Miller 1, 18-18-5e, set 6-inch 2206 ft. Ouachita Nat. Gas Co.'s D'Arbonne 2-A, 34-19-3e, dr plug 2167 ft; Smith 7, 38-20-4e, set 8-inch at 791 ft. Peerless Co.'s Moore 3, 49-20-4e, lcn. Palmer Corp.'s West Virginia T. Co. 3, 5-18-4e, rig. Southern Carbon Co.'s Fairbanks 8, 38-19-4e, set 6-inch 2088 ft. United Carbon Co.'s Nelson Fee 2, 6-19-5e, dr 120 ft. West Virginia O. & G. Co.'s Fee 5, 5-18-5e, set 12-inch 189 ft.

RAPIDES PARISH—Collins Bros.' Allen 1, 25-5-1w. dr 1200 ft.

RICHLAND PARISH—Gulf Ref. Co.'s Wayne L. & T. Co. 2, 23-16-5e, sd 2453 ft; Millsap 1, 8-17-6e, dr 1875 ft; Rhymes 3, 28-17-16, lcn. Louisiana Pet. Co.'s Binion 1, 22-17-16, sd 2474 ft. Moody & Seagraves' Osborne 1, 14-15-5e, set 10-inch at 985 ft; McCoy 2, 30-16-6e, testing 2406 ft; Noble 1, 36-16-5e, dr 1976 ft; McClanahan 1, 36-16-5e, bailing 2300 ft; Hatch 1, 34-16-15, lcn; Hemler B-1, 20-16-6e, set 6-inch at 2285 ft; Hemler B-2, 6-15-6e, dr 1986 ft; Hemler C-1, 29-16-6e, rig; La Fleuer 1, 18-16-6e, lcn. Natural Gas & Fuel Corp.'s Sortor A-1, 9-16-6e, set 8⅝-inch at 2282 ft; Sorter B-2, 19-16-6e, set 6⅝-inch at 2279 ft; Sortor B-3, 19-16-6e, lcn; Sortor B-4, 19-16-6e, lcn; Thompson A-1, 21-16-6e, lcn. Roxana's Tensas 2, 1-14-5e. dr 2590 ft. Standard Drilling Co.'s Delta H. L. Co. 1, 22-16-7e, dr 2786 ft. Southern Carbon Co.'s Sortor 1, 20-16-6e, dr 1700 ft. Stovall Drilling Co.'s Dunning 1, 26-16-6e, set 8-inch 886 ft.

SABINE PARISH—Ark. Fuel Oil Co.'s Logan A-1, 23-10-12, co 4258 ft; Logan 10, 32-10-12, sd 2980 ft; Logan 11, 33-10-12, set 6⅝-inch at 3189 ft. S. P. Borden Tr.'s Logan 1, 36-10-13, dr 2036 ft. Clark Seip et al's Moore 1, 32-10-12, set 10-inch at 210 ft. Dixie Oil Co.'s Steinfield 1, 20-10-12, set 10-inch at 100 ft. L. M. Emlet's Bowman Hicks 6, 8-7-12, sd 3710 ft; Bowman Hicks 7, 11-7-14, bailing 3560 ft; Mansfield H. L. Co. 1, 15-7-14, set 12½-inch 120 ft. Magnolia's Rembert 2, 32-10-12, wosr 3240 ft. Moffit et al's Moore 3, 5-9-12, wosr 3332 ft.

UNION PARISH—Barbour Oil Co.'s Tugwell 1 (formerly C. E. Camette) 21-22-1e, sd 2112 ft. Carter et al's Security Trust 1, 7-23-1e, sd 2257 ft. Interstate Nat. Gas Co.'s Parks 1, 32-20-3e, dk; Stephenson 1, 6-21-4e, lcn. Southern Carbon Co.'s Harris 1, 20-20-4e, dr 2154 ft.

WEBSTER PARISH—Arkansas Natural Gas Co.'s N. Central Texas 1, 26-23-10, dr 100 ft. Humble O. & R. Co.'s Gray 1, 26-21-10, fsh 3541 ft; Babb 5, 14-21-10, dr 2718 ft. S. A. Lane's Miles 1, 24-17-9, dr 1335 ft. Magnolia's Aarnes Cox 3, 22-21-10, dk; Haynesville Merc. Co. 1, 1-22-10, testing 2614 ft; Marshall 5, 21-21-10, wosr 2526 ft; Mixon 1, 22-22-10, set 13⅜-inch at 322 ft; Cole 1, 27-21-10, dr 3387 ft; D. G. Cox 1, 22-21-10, changing rig 2715 ft; Newsome 1, 32-23-9, set 6⅝-inch at 2607 ft; Roseberry 1, 29-23-9, set 10¾-inch at 403 ft. Northwest La. Gas Co.'s Munn 1, 36-23-10, set 10-inch at 400 ft. Ohio Oil Co.'s Holloway 4, 23-21-10, tested 1½ mil ft gas at 4515 ft.

WINN PARISH—Ohio Oil Co.'s Rolen 1, 9-12-1w, sd 2149 ft; Edenborne 1, 31-10-4w, sd 2603 ft; Rolen Account 1, 5-12-1w, dr 3093 ft. H. M. Roark's Southern Mineral Co. 3, 19-11-3w, sd 525 ft.

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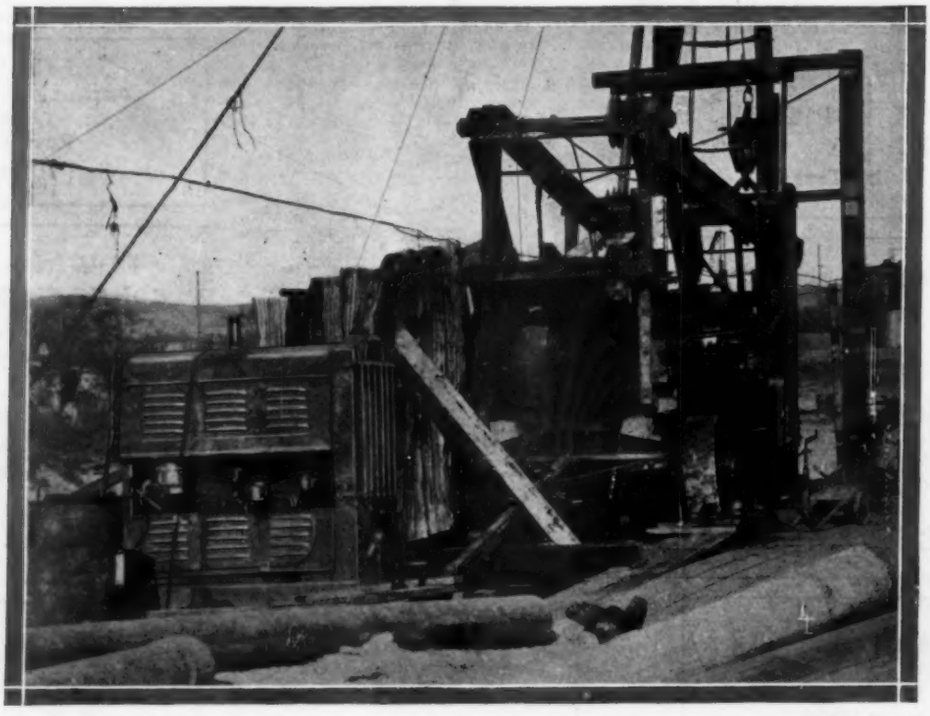

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